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Ford and Futurism:
Modern Time at the Panama-Pacific International Exposition

by

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Abstract

My thesis explores the intersection of time and speed in two different displays at the 1915 San Francisco Panama-Pacific International Exposition (PPIE). In chapter one, titled “The Assembly Line: Accumulation,” I analyse a narrative of progress enacted in the Ford Motor Company’s popular modified assembly line display that produced one Model T every ten minutes during its operation. Chapter two, titled “Italian Futurism: Collision,” explores the first exhibition of Italian Futurist painting and sculpture in America at the PPIE. In order to contextualize the exhibition I will take up the critical reception of the exhibition before examining conceptions of speed and progress in the work of literary founder Filippo Tommaso Marinetti and artist Umberto Boccioni. Both displays are visual narratives of progress presented as spectacles of speed and time. In juxtaposing the two I endeavour to elucidate the false promise of technological liberation implied at the end of each narrative.

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Introduction:

Constructing the Panama-Pacific International Exposition

My thesis explores the intersection of time and speed in two different displays at the 1915 San Francisco Panama-Pacific International Exposition (PPIE). In chapter one, titled “The Assembly Line: Accumulation,” I explore the Ford Motor Company’s (FMC) modified assembly line display in the Palace of Transportation; in chapter two, titled “Italian Futurism: Collision,” I take up the exhibition of Italian Futurist painting and sculpture in the annex to the Palace of Fine Arts. In doing so I endeavour to elucidate how progress was conceptualized as visual narratives in these two displays and how these narratives of progress produced an understanding of history.

The exposition celebrated the opening of the Panama Canal, an engineering feat on a monumental scale and an historic achievement in transportation technology. With this new technological feat, the time needed to travel from the Atlantic to the Pacific was shortened; ships no longer had to round Cape Horn, they could pass in between North and South America. San Francisco, a city on the Pacific Ocean, was well positioned to benefit from the new shipping routes. The Panama Canal was only the most recent of a series of important advances in transportation technology, and the PPIE was only the most recent in a series of world’s fairs. World’s fairs had been instrumental in introducing a number of important and influential advances in modern technology: the Eiffel Tower was built for the Paris Exposition in 1889; the first ferris wheel was constructed for the 1893 Chicago World’s Fair; talking films were first screened to the public at the Exposition Universelle in Paris in 1900; and

wireless telegraphy was successfully demonstrated for the first time at the 1904 St Louis Fair.[1] San Francisco would be no different. "A somewhat disappointed foreign observer at the World's Columbian Exposition of 1893 remarked that the world's fairs were then following one another with such speed that it was ungenerous to expect new scientific wonders at each one…"[2] Wolfgang Schivelbusch, an historian especially interested in transportation systems, notes that the world appeared to be moving faster at the turn of the century; people and goods could move around the world more rapidly than ever; new technologies were being developed every day;[3] and even world's fairs were springing up in rapid succession. In celebrating the Panama Canal, the PPIE followed suit with the previous world's fairs' introduction and display of new technologies and as a result it foregrounded the new speed and time of the modern world.

In 1904, businessman Reuben Hale, supported by a collection of elite San Franciscans, first proposed the idea that San Francisco should mark the opening of the Panama Canal with an international exposition; the fair, entitled the Panama-Pacific International Exposition, opened to the public eleven years later, in 1915.[4] The French had begun work on the canal that bridged the Isthmus of Panama in 1881; plagued with disease and dissuaded by the great difficulty of

[1] John E. Findling, ed., *Historical Dictionary of World's Fairs and Expositions, 1851–1988* (New York: Greenwood Press, 1990), 111, 127, 159, and 184.
[2] Stanley Appelbaum, *The Chicago World's Fair of 1893: A Photographic Record* (New York: Dover Publications, Inc., 1980), 7.
[3] Wolfgang Schivelbusch, "Railroad Space and Railroad Time," in *The Railway Journey: The Industrialization of Time and Space in the 19th Century* (Berkeley: University of California Press, 1977), 33–44.
[4] Carolyn Peter, "California Welcomes the World: International Expositions, 1894–1940 and the Selling of a State," in *Reading California: Art, Image, and Identity, 1900–2000*, eds. Stephanie Barron, Sherri Bernstein, and Ilene Susan Fort (Berkeley: University of California Press, 2000), 71.

constructing such a colossal structure, they had abandoned the project by 1894.[5] Geographically, many parties in the US had vested interests in developing a thoroughfare across the isthmus.[6] From 1894 to 1904 the US explored different options for constructing a canal to bridge the strip of land; in 1902 the US senate voted in favour of exploring a Panamanian option.[7] In 1904 US President Theodore Roosevelt announced his decision to create a commission to oversee the construction of the Isthmian passageway.[8] According to Robert Rydell, an historian of world's fairs, the collective of San Francisco businessmen "drew their inspiration [for the exposition] from President Theodore Roosevelt's decision…and [from] the opening of the Louisiana Purchase Exposition." Rydell writes, "Plans for the San Francisco celebration moved ahead over the next year and a half as the city's business leaders gathered pertinent records from the directors of the Saint Louis fair."[9]

On April 18, 1906, a major earthquake struck the city of San Francisco and the northern coast of California.[10] Ignited by the quake, a series of fires erupted throughout the city of San Francisco, burning for several days.[11] As a result of the earthquake and ensuing fires, many people were displaced, injured,

[5] Willis J. Abbot, *Panama and the Canal in Pictures and Prose: A Complete Story of Panama, As Well As the History, Purpose, and Promise of its World-Famous Canal, The Most Gigantic Engineering Undertaking Since the Dawn of Time* (London: Syndicate Publishing Co., 1913), 119-122.
[6] Abbot, *Panama and the Canal*, 123.
[7] Abbot, *Panama and the Canal*, 123.
[8] Rydell, "The Expositions in San Francisco and San Diego: Toward the World of Tomorrow," in *All the World's a Fair: Visions of Empire at American International Expositions, 1876-1916* (Chicago: University of Chicago Press, 1984), 214.
[9] Rydell, "The Expositions," 213–214.
[10] Kevin Starr, "Chapter 9: The City Beautiful and the San Francisco Fair," in *Americans and the California Dream, 1850–1915* (Oxford: Oxford University Press, 1973), 293.
[11] Abraham Lincoln Artman Himmelwright, *The San Francisco Earthquake and Fire: A Brief History of Disaster; A Presentation of Facts* (New York: Roebling Construction Company, 1906), 21, 23.

or killed, and a large portion of the city was destroyed.[12] Historian Kevin Starr writes, "On 21 April 1906, while the city yet burned, the San Francisco *Chronicle* headlined: "San Francisco will rise from the ashes, a greater and more beautiful city than ever."[13] Before the natural disaster that destroyed much of the city, San Francisco was, in the words of art historian Carolyn Peter, "one of the key ports bound to benefit from [the] major change in shipping routes" facilitated by the Panama Canal; the exposition would show the world what the city had to offer.[14] Although this remained true even after the devastating disaster, the exposition "became doubly important…for San Francisco to show the world that it had risen from the ashes and rebuilt itself."[15] The exposition became the rallying point for the reconstruction of the city.[16]

In his book *Americans and the California Dream: 1850–1915* (1986), Kevin Starr devotes a chapter entitled "The City Beautiful and the San Francisco Fair" to city forming, planning, and promoting in San Francisco from the late 1880s to 1915.[17] San Francisco in the late 1880s–90s, Starr asserts, was a city of lost opportunities, for "here on the empty edge of a nearly empty continental shelf should have been built the city beautiful…"[18] In response to this failure, civic planners from the turn-of-the-century period in San Francisco (and the entire United States) developed a variety of different urbanization plans ranging from

[12] Himmelwright, *The San Francisco Earthquake*, 23.
[13] Starr, "Chapter 9," 293. Starr draws this quote from Russell Quinn's *The San Francisco Press and the Fire of 1906* (San Francisco: Work Projects Administration, 1940).
[14] Carolyn Peter, "California Welcomes the World," 71.
[15] Peter, "California Welcomes the World," 71.
[16] Rydell, "The Expositions in San Francisco and San Diego," 214.
[17] Starr, "Chapter 9," 288–306.
[18] Starr, "Chapter 9," 288.

the practical to the fanciful.[19] Although it was a result of traumatic disaster, the city was now free to re-design itself as a city of the future.

Historian William H. Wilson, who specializes in urban development and growth in the United States at the turn of the century, writes, “Intense city planning activity under the City Beautiful banner flared for little more than a decade, yet the movement was the first self-conscious, nationwide effort to bring order, system, and pattern to the United States’ chaotic urban growth.” Wilson argues that the roots of the City Beautiful movement are found in “landscape design, municipal improvement, and civic design movements” culminating in the late nineteenth century. Furthermore, Wilson argues that these civic design movements sprang up in response to the “new urban realities of the late nineteenth century,” including rapid growth in urban population and rising living standards in urban centers in the nineteenth century.[20]

Civic design, under the City Beautiful movement, took its visual inspiration from the architecture, sculptural, and mural elements of the 1893 World’s Columbian Exposition (WCE) in Chicago.[21] As the director of works at the WCE, American architect Daniel Hudson Burnham was chiefly responsible for the architectural program and layout of the fairgrounds.[22] Designed around an axial basin, the WCE was dubbed the “White City” for its shimmering white buildings, a manifestation of the classicizing Beaux-Arts style coming out of Europe.[23] Despite the impermanent nature of the fairgrounds at the WCE, the White City

[19] Starr, “Chapter 9,” 288.
[20] William H. Wilson, “The Ideology, Aesthetics and Politics of the City Beautiful Movement,” in *The Rise of the Modern Urban Planning 1800–1914*, ed. Anthony Sutcliffe (New York: St. Martin’s Press, 1980), 165–169.
[21] Wilson, “The Ideology, Aesthetics and Politics of the City Beautiful Movement,” 170.
[22] Peter Hall, *An Intellectual History of Urban Planning and Design in the Twentieth Century* (Oxford: Blackwell Publishing, 2002), 189.
[23] Wilson, “The Ideology, Aesthetics and Politics of the City Beautiful Movement,” 169.

became an important inspiration for the architects and designers of the City Beautiful movement and Burnham went on to great success as an urban development planner in a number of American cities. In 1904, when a group of progressive businessmen founded the Association for the Improvement and Adornment of San Francisco, a formal invitation was issued to Burnham, who quickly created a complete city plan for San Francisco. [24]

With a clear eye to the legacy of his work, Burnham told the Association that "the plan for your city [San Francisco] must be framed in accord with your needs in the distant future—for all time."[25] Starr describes Burnham's design as an "imperial vision of San Francisco [expressive of a collection] of attitudes held in common with the business community that had brought him to the city;" furthermore, this "imperial city was designed for men of empire…for the sake of men who counted."[26] On April 17, 1906, Burnham's design was delivered from the printers directly to City Hall; although not yet formally accepted by the city, the Association for the Improvement and Adornment of San Francisco hoped to make Burnham's vision a reality. At a little after five the next morning, the earthquake struck the city. A large portion of San Francisco was wiped away; the opportunity to build a city of the future was at hand. Burnham was confident that his design would provide the guidelines for the reconstruction.

City leaders and the business community initially continued to support Burnham's plan, but others, among them M. H. De Young, owner and publisher of the *Chronicle*, soon raised their voices in dissent.[27] According to Starr, the

[24] Starr, "Chapter 9," 290.
[25] Charles Moore, *Daniel Hudson Burnham, Architect, Planner of Cities,* volume (Boston: Houghton Mifflin Company, 1921), 170.
[26] Starr, "Chapter 9," 291–292.
[27] Starr, "Chapter 9," 293–294.

detractors criticized the design for being "socially unrealistic, a paper renovation without context or muscle."[28] Coupled with the public outcry against the plan, divisions amongst the committee appointed to oversee reconstruction of the city were ultimately responsible for suppressing Burnham's design. On San Francisco's ultimate reconstruction, Starr writes:

> Within three and a half years downtown San Francisco was rebuilt along pre-earthquake lines. Within five years, recovery was total. Except for fireproof construction in commercial buildings, the new city reproduced the worst features of the old: gridiron streets crowded with flimsy wooden units packed side by side in treeless monotony.[29]

The reconstructed San Francisco made no improvements to the old city; the dream of the city of the future had yet to be realised.

After the disappointment over the reconstruction of the city, it became even more important to present an image that reflected all that had been neglected in new San Francisco at the Panama-Pacific International Exposition: beauty, organization, and industry. In 1911 the PPIE received President William Taft's blessing, all but ensuring its realization.[30] Charles C. Moore was appointed head of the Panama-Pacific International Corporation (PPIC). Rydell points out that Moore's experience as president of one of the nation's largest hydroelectric engineering firms made him an inspired choice since "the engineering triumph of the canal was the occasion for the celebration."[31] Modern speed and time exuded in the Panama Canal were the creation of the engineer. Edward Bennett, architect and city planner, who had previously assisted Burnham in Chicago in

[28] Starr, "Chapter 9," 293–294.
[29] Starr, "Chapter 9," 295.
[30] Peter, "California Welcomes the World," 71; Rydell, "The Expositions in San Francisco and San Diego," 217.
[31] Rydell, "The Expositions in San Francisco and San Diego," 213.

1893 and San Francisco in 1905, was selected as the Director of Works.[32] Under the leadership of these men and with the help of many others, the PPIE began to take shape.

The PPIC purchased six hundred and thirty-five acres along San Francisco's bay front, stretching panoramically beneath the hills of the Presidio.[33] In the process the exposition company razed over 400 dwellings and filled in acres of the marshy Harbor View area that had once been twenty five feet under water. [34] This land reclamation pushed San Francisco further into the Bay; the area is now known as the Marina. On this piece of land that Starr refers to as a "*tabula rasa,* as temptingly bare as inner San Francisco after the fire," the Department of Works at the PPIE "realized a City Beautiful, [composed of] an interplay of boulevards, courts and monumental edifices, where fountains splashed and colors glowed in the sun."[35] Just as it had been with the San Francisco after the quake, destruction was followed by construction; only this time the outcome would reflect a vision of the future not the past.

The postcard, *Panorama of the 1915 San Francisco Panama Pacific International Exposition* (Figure 0.1) depicts a picturesque view of the completed fairgrounds, which were open to the public between February 20 and December 4, 1915. The postcard captures only the section of the fairgrounds created exclusively by the PPIC; it omits the national and state pavilions as well as the Joy Zone. The domed roof of the Palace of Fine Arts' rotunda provides the boundary in the mid ground, on the far left. As the eye moves from left to right we

[32] Starr, "Chapter 9," 296.
[33] Peter, "California Welcomes the World," 74; Starr "Chapter 9," 296.
[34] Frank Morton Todd, *The Story of the Exposition,* volume 1 (New York: G. P. Putnam Sons, 1921), 298.
[35] Starr, "Chapter 9," 296.

may take note of the Tower of Jewels, the tallest building in the image, rising above the Court of the Universe. The Column of Progress was on the bay, directly across from it. To the right of the Tower of Jewels, stand two buildings, the Palace of Manufactures, and, behind it, the Palace of Transportation. A labelled diagram of the fairgrounds makes the relationship of these buildings clear (Figure 0.2). The domed roof of the Palace of Machinery provides the boundary on the right. The architecture of the fair is generally classified into two categories, Mission or Spanish Revival and the classicizing Beaux-Arts, represented by the Palace of Transportation and the Palace of Fine Arts, respectively.[36] Examples of these two styles are the Spanish Revival portal ornamenting the Palace of Transportation (Figure 0.3 and 0.4) and the low relief classicizing reliefs adorning the dome of the Palace of Fine Arts (Figure 0.5).

With the exception of the Palace of Fine Arts, designed by Bernard Maybeck, all the buildings erected by the PPIE Department of Works (not including the national and state buildings, which were for the most part the responsibility of their respective nations/states) were destroyed after the fair closed in December 1915;[37] responding to the building's popularity, organizers agreed to keep the Palace of Fine Arts intact, despite the fact that it had been built as an impermanent structure.[38] *Palace of Fine Arts at the Pan. Pac. Int. Exposition, San Francisco, 1915* (Figure 0.5), showcases the Beaux-Artes style. The Palace of Fine Arts included an exhibition building, situated behind an open air rotunda. As you can see in the postcard, an arched colonnade decorated a

[36] Peter, "California Welcomes the World," 74.
[37] Panama-Pacific International Exposition, *Division of Works Contract and Specifications for Wrecking Exposition Buildings and Clearing Site of Debris and Wreckage* (San Francisco, 1915), 12.
[38] Peter, "California Welcomes the World," 74; Starr "Chapter 9," 297–298.

walking path that surrounded a small lagoon in front of the domed rotunda. The heavy planting of the entire area added to the romantic atmosphere. Maybeck proclaimed that it was meant to suggest "an old Roman ruin, away from civilization, which two thousand years before was the center of action and full of life and now is partly overgrown with bushes and trees." Described by Kevin Starr as "nostalgic, time drenched, and evocative of yearnings for lost loveliness," the Palace of Fine Arts rooted the relatively young culture of California in the lineage of ancient Western civilization."[39]

In contrast to the Palace of Fine Arts, the rest of the fairgrounds were completely destroyed by June 30, 1916. The fairgrounds of the PPIE—the physical manifestation of the fair—occupied the artificially reclaimed land on the San Francisco bay for a little over a year and were open to the public for less than ten months. The phoenix-like resurrection of the city of San Francisco was simultaneously, and paradoxically, celebrated by a monumental feat of modern technology, the Panama Canal, and the ancient ruins of Greece and Rome, the Palace of Fine Arts.

This introduction has served to briefly describe one narrative of progress bound up in the temporal life of the PPIE. Among the exhibits, I have chosen to explore two displays that present their own narratives: the Ford Motor Company's modified assembly line and art of the Italian Futurists. I have chosen to juxtapose these two displays because both embraced speed as the vehicle of man's emancipation from the present which appeared to be moving uncontrollably too fast into the future; however Ford's display was well-received while the Futurist

[39] Peter, "California Welcomes the World," 74.

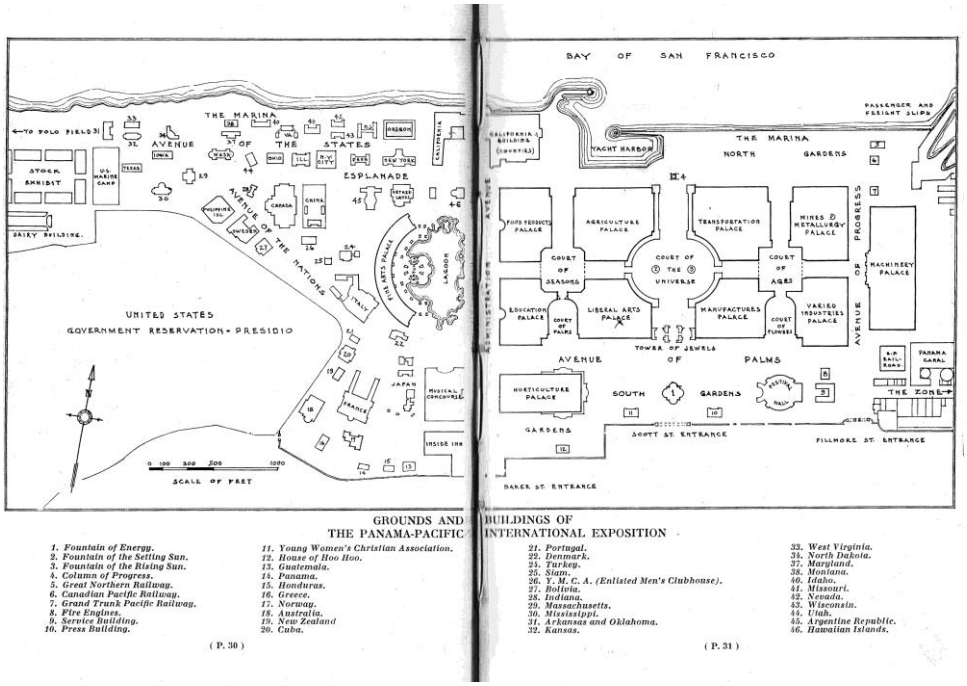
exhibition was not.[40] In the twentieth century, as speed seemed to exert a stronger force on time, the present began to fly by as men hurtled themselves into the future. Even ruins, like the Palace of Fine Arts, were constructed and destroyed in quick time, where once they had been formed by the slow decay of time.

This is an art history and visual culture thesis; therefore photographs of Ford's assembly line display and of the Futurists' art and exhibition will be at the heart of my argument. I will be examining these photographs as historical documents, objects, and subjects. Furthermore, I will be employing Henri Bergson's theory of Duration and Walter Benjamin's these on the philosophy of history to examine the temporal implications of the physical displays and the photographic remains. In order to explore the social and historical context of these exhibits at the PPIE I will be employing a series of sources contemporary with the fair including: Benedict Burton's *The Anthropology of the World's Fairs: San Francisco's Panama-Pacific International Exposition,* 1915; the writings of the Italian Futurists; Christian Brinton's *Impressions of the Art at the Panama-Pacific Exposition*; Sheldon Cheney's *Art-Lover's Guide to the Exposition: With Explanations of the Architecture, Sculpture, and Mural Paintings, with a Guide for Study in the Art Gallery;* and the *Catalogue Deluxe of the Department of Fine Arts, Panama-Pacific International Exposition.* I will also be employing secondary sources including: Nancy Boas's *Society of the Six* (1988); Milton Brown's *American Painting: From the Armoury Show to the Depression* and *The Story of the Armoury Show*; Margaret Burke's "Futurism in America 1910–1917;"

[40] Roland Marchand, "Corporate Imagery and Popular Education: World's Fairs and Expositions in the United States, 1893-1940," in *Consumption and American Culture*, eds. David E. Nye and Carl Pedersen (Amsterdam: Vu University Press, 1991), 21–22.

Marianne Martin's *Futurist Art and Theory: 1909–1915*; and Christine Poggi's *Futurism and Anthology*.

Figure 0.1 Bardell Printing Co., *Birdseye View of the Pan. Pac. Int. Exposition, San Francisco*, postcard, collection of the Henry Madden Library, California State University, Fresno (Photo: author).



GROUNDS AND BUILDINGS OF THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION

1. *Fountain of Energy.*
2. *Fountain of the Setting Sun.*
3. *Fountain of the Rising Sun.*
4. *Column of Progress.*
5. *Great Northern Railway.*
6. *Canadian Pacific Railway.*
7. *Grand Trunk Pacific Railway.*
8. *Fire Engines.*
9. *Service Building.*
10. *Press Building.*
11. *Young Women's Christian Association.*
12. *House of Hoo Hoo.*
13. *Guatemala.*
14. *Panama.*
15. *Honduras.*
16. *Greece.*
17. *Norway.*
18. *Australia.*
19. *New Zealand*
20. *Cuba.*
21. *Portugal.*
22. *Denmark.*
23. *Turkey.*
25. *Siam.*
26. *Y. M. C. A. (Enlisted Men's Clubhouse).*
27. *Bolivia.*
28. *Indiana.*
29. *Massachusetts.*
30. *Mississippi.*
31. *Arkansas and Oklahoma.*
32. *Kansas.*
33. *West Virginia.*
34. *North Dakota.*
37. *Maryland.*
38. *Montana.*
40. *Idaho.*
41. *Missouri.*
42. *Nevada.*
43. *Wisconsin.*
44. *Utah.*
45. *Argentine Republic.*
46. *Hawaiian Islands.*

(P. 30) (P. 31)

Figure 0.2 Artist unknown, “Grounds and Buildings of the Panama-Pacific International Exposition,” diagram from Ben Macomber, *The Jewel City: Its Architecture, Sculpture, Symbolism, and Music; Its Gardens, Palaces, and Exhibits* (San Francisco: J. H. Williams, 1915), 30.

Figure 0.3 Cardinell-Vincent Company, *Palace of Mines and Palace of Transportation, Fronting on the Marina*, postcard, collection of the Henry Madden Library, California State University, Fresno (Photo: M. Elizabeth Boone).

Figure 0.4 Cardinell-Vincent Company, *Marina Entrance, Palace of Transportation at the Pan. Pac. Int. Expo. San Francisco, 1915*, postcard, collection of the Henry Madden Library, California State University, Fresno (Photo: author).

Figure 0.5 Cardinell-Vincent Company, *Palace of Fine Arts at the Pan. Pac. Int. Exposition, San Francisco, 1915*, postcard, collection of the Henry Madden Library, California State University, Fresno (Photo: M. Elizabeth Boone).

Chapter 1

The Assembly Line: Accumulation

In 1915, the Ford Motor Company was in the midst of their most successful period. Ford had revolutionized the American factory system with the implementation of Taylorism; Ford cars were undoubtedly the most popular car company in America. It was during this period, roughly 1910–1920, that cars became a household item in the United States, available and desirable to all Americans.[41] Throughout this period the Ford Motor Company presented their methods and systems of operation to the public in many different kinds of displays: public tours of their factory and technology museum in Dearborn, Michigan; displays of their employees' housing; and exhibitions of their latest innovations at International Expositions such as the 1915 Panama-Pacific International Exposition.

In the Palace of Transportation (Figure 1.1) the FMC contributed an exhibit in the automobile section on the corner of avenue A and 7th street, in the northeast corner of the building, that included a modified assembly line (Figure 1.2 and 1.3). It was one of the first public demonstrations of the system for which the FMC became famous. From February 20 to December 4, 1915, the popular display produced completed Model T cars during its daily three hours of operation.[42] Employees of the Ford Motor Company assembled one car every ten minutes (approximately eighteen cars a day) to the amazement and awe of the

[41] Peter J. Ling, *America and the Automobile: Technology, Reform and Social Change* (Manchester: Manchester University Press, 1990), 127.
[42] Marchand, "Corporate Imagery and Popular Education," 21–22.

crowd of spectators who gathered daily.[43] The Palace of Transportation housed a variety of different exhibits related to areas of transportation such as, saddlery and harnesses, carriages and wheelwrights, automobiles, railways, aeroplanes, hot air balloons, and marine transportation.[44] There was an abundance of exhibitors in the Palace of Transportation; in addition to Ford, the automobile section included displays by such companies as Buick, Cadillac, General Motors, Harley-Davidson, and Studebaker.

The assembly of an automobile in the Ford display at the PPIE began with the rear axle. More and more parts were added to the incomplete machines as they moved up the line, quickly and efficiently so as not to waste a cent of time. Once completed, at the end of the line, the automobile was finally revealed for the delight and consumption of the crowd of spectators. The finished automobile was fit for driving; it was a complete commodity ready to be sold. Figure 1.2 does not clearly convey the process of the assembly line; instead, it

[43] I have collected five different sources that provide accounts of the number of cars produced and the time within which it took to complete them in the FMC's assembly line display at the PPIE. The title of Figure 1.2 declares that the assembly line display produced one car every ten minutes; however, French Strother, a journalist writing about the exposition in 1915 writes, "the workmen [assembled] the parts of a Ford car before the eyes of the spectators as they do the same work in the Ford plants, completing the car in eighteen or twenty minutes and running it out of the building under its own power," (359). A pre-exposition pamphlet produced by the FMC, advertising their displays at the PPIE states "25 Ford cars assembled each day," (1) while the caption on Figure 1.3 states "eighteen Ford cars are turned out each day." Art historian Terry Smith, writing in 1993, supports this assertion; the "assembly line…actually turned out eighteen Model Ts each day," (137). I have chosen to disregard the information provided by Strother and the pre-exposition pamphlet because they provide contradictory information to the other three sources; while the information provided in the remaining three sources, Figures 1.1, and 1.2, and Terry Smith, all support each other. French Strother, "The Panama-Pacific International Exposition," *World's Work* (July, 1915): 359; Ford Motor Company, *Ford at the Panama-Pacific International Exposition San Francisco 1915*, three page printed pamphlet, collection of the Henry Madden Library, California State University, Fresno; Robert A. Reid, *The Blue Book: A Comprehensive Official Souvenir View Book of the Panama-Pacific International Exposition* (San Francisco: Robert A. Reid, 1915), 70; Terry Smith, *Making the Modern: Industry, Art, and Design in America* (Chicago: The University of Chicago Press, 1993), 137.

[44] PPIE, *Official Catalogue of Exhibitors, Palace of Transportation*, *PPIE, San Francisco, 1915* (San Francisco: Department of Works, 1915), 9–10.

pictures the end result, a completed automobile in the foreground obscuring a series of uncompleted machines in the background.

The composition of the foreground of the photograph *Where an Automobile was Born Every Ten Minutes; Henry Ford's Concession, Palace of Transportation* (Figure 1.2) is divided into two distinct sections: on the right is the assembly line display, while on the left, separated by a railing, are spectators. Aside from this division, which I will address presently, the photograph is populated entirely by male figures; it is interesting, but perhaps not surprising, to note the gender disparity represented in the photograph. On the right hand side, the assembly line is composed of human labourers, tools, and machine parts. The machine parts are pictured in various states of assemblage and in piles for future assembly as the labourers work to complete each automobile in the allotted ten minutes. The labourers are registered on film as blurry ghosts; rather than solid, sharply rendered figures. Their obscured nature not only precludes any individual features or characteristics from materializing on the surface of the photograph, but it also blurs the boundary between the humans performing the labour and the machines being built; consequently the assembly line workers lose all differentiation one from another and from the work at hand. The distinction between the work of labour and the labourers themselves is lost in the image. The railing—separating the workers (and their action), from the spectators (and their gaze)—is the only clear point of differentiation for the labourers; it is the most prominent compositional element in the photograph, forming a dynamic diagonal line across the picture plane.

The spectators, on the left hand side of the photograph, are more sharply rendered due to the static nature of their passive bodies as they observe the

action of the assembly line. Although, with careful study, these male figures are distinguishable one from another, at a glance they appear to be interchangeable: all are men, wearing bowler hats, white shirts, and overcoats. The photograph ultimately depicts two distinct groups separated by a physical barrier, and each group features interchangeable parts. The customers are separated from the producers, just as the spectators are separated from the performers. The labourers are interchangeable with each other, and the consumers are likewise barely distinguishable one from another.

The Ford exhibit, in the Palace of Transportation, included more than just the modified assembly line; not clearly visible in the photograph were several large images ringing the top of the walls in the FMC's display. They are more visible in the two photographs titled "The Ford Motor Exhibit" (Figure 1.3), reproduced in *The Blue Book: A Comprehensive Souvenir View Book* (1915), by Robert A. Reid.[45] The images depict different landscapes throughout the United States, all populated by Ford automobiles and their drivers.[46] The images are meant to convey to the viewers of the display that with a Ford car one was free to travel throughout the United States at leisure. Amidst a period in which speed and progress were felt in all aspects of life, the car liberated the individual from the monotony (and impotence) of a sedentary lifestyle. On the left side of the top photograph in "The Ford Motor Exhibit," the shiny, reflective, black exteriors of completed Ford automobiles are displayed behind a railing.

[45] It is unclear to me whether the images ringing the top of the FMC display are paintings, prints or photographs. I have found no written reference to them that seeks to establish the medium. It would be my guess, based on their scale, that the images are paintings. Terry Smith refers to them as "scenes," with no mention of the medium. Smith, *Making the Modern,* 137.
[46] Smith, *Making the Modern*, 137.

Where an Automobile was Born Every Ten Minutes, the photograph around which this chapter is focused, concentrates on the juxtaposition of consumer and producer, while giving a hint to the overall message of the Ford exhibition: the liberation of the individual through the power of the machine, the motor, and modern industry. By the logic of this display, as soon as the individual becomes a consumer, he is liberated. At the same time, the exhibition demonstrates how integral a force speed was in the contemporary conception of progress and modernity. Speed was the measure of the day and in order to keep up with its forward propulsion it was necessary to equip oneself with the tools of speed (the assembly line, the car). The representation of speed became increasingly important to the culture that was developing in Europe and North America that privileged an ever-expanding and increasing concept of progress.

Frederick Winslow Taylor (1856–1915) was an important and popular proponent of this culture of speed and, subsequently, of a concept of progress. The modified assembly line demonstrated how man could master the speed of time, how he could harness speed and time for his benefit, and, all in the form of an entertaining performance. The FMC took up the challenge of representing speed visually in an exposition display. Because speed is an abstract force the FMC's display had to present it to the exposition's audience in such a way that it could be perceived and identified. Measurement is a powerful tool that can be applied to abstract forces, such as time and speed, in order to impose control and universal meaning to them. Representation of speed in the FMC's modified assembly line allowed it to be measured in increments of time; furthermore, measurement provided the illusion of control. In this exhibit, control was equated with freedom; in controlling speed and subsequently time, the modified assembly

line offered its audience and customers freedom from the uncontrolled forward propulsion of progress. The movements of the labourers in the assembly line were designed to be identical, just as the mechanical parts they handled were identical; the homogenous labour and parts created identical automobiles, one after the other in constant repetition. The uniform composition of the assembly line display produced a visual representation of man's control over speed as a force that was measurable in increments of time. By harnessing speed, not only did the FMC offer liberation from the force of progress, but it also suggested that they could produce an apparently unlimited supply of automobiles. The images surrounding the top of the exhibition hall suggested, moreover, that the automobile could liberate the individual from the impotency of a pre-modern (pre-speed) lifestyle.

In this model, speed is also entertaining and aesthetically pleasing. The modified assembly line was a performance, admired for the rhythm and beauty of speed. It cannot be ignored that the FMC's displays at the PPIE were multi-faceted advertisements for a Ford lifestyle. Along with the automobile display in the Palace of Transportation, the FMC contributed displays related to the lives of their employees inside and outside of the factory, for which the FMC won the grand prize, medal of honour and the gold medal at the PPIE.[47] In the Palace of Mines the FMC contributed a sociological exhibit "showing the improved living conditions [achieved] through Ford profit-sharing with employees," and in the Palace of Education they showcased a motion picture exhibit featuring one or

[47] PPIE, "The Ford Motor Exhibit," in Reid, *The Blue Book,* 70.

more films.[48] At the PPIE the FMC was advertising a culture of speed and promoting it as the American dream.

In the nineteenth and early twentieth centuries, the era of speed was ushered in through the rapid development of transportation technologies. Both systems of transportation and vehicles of transportation had undergone, and were continuing to undergo, rapid changes in order to accommodate the unrelenting industrialization of Europe and North America. From the development and improvement of road systems, railways, and waterways to the invention and implementation of trains, cars, and airplanes, the industrialization of transportation affected all aspects of life. In particular, the rapid changes in transportation technology transformed how people experienced time and space. As rapid transportation became more widespread and accessible to populations in industrializing countries, transportation time was reduced; time seemed to move faster and space appeared to shrink.[49] By the twentieth century, speed was a defining feature of the Western World; slowness, its opposite, was undesirable and a trait to be eliminated.

Many aspects of modern life began to be rewritten in the language of speed. The assembly line, for example, was one part of the system known as Taylorism, a scientific management system developed by the aforementioned American mechanical engineer Frederick Winslow Taylor in the early twentieth century. *The Principles of Scientific Management*, written by Taylor in 1911,

[48] Smith, *Making the Modern,* 137. It is unclear whether or not there was one or more films being featured by the FMC. I have come across two different film titles – *How Henry Ford Makes One Thousand Cars per Day* and *Making of an American*. See Smith, *Making the Modern*, 137, and Ford Motor Company, *Ford at the PPIE San Francisco 1915*, three page printed pamphlet.

[49] Wolgang Schivelbusch, "Railroad Space and Railroad Time," in *The Railway Journey: The Inductrialization of Time and Space in the 19th Century* (Berkeley: The University of California Press, 1977), 33.

outlines a model to increase the speed of production in factories. In order to do so, Taylor's model aimed to eliminate inefficiency (the biggest obstacle to unencumbered speed) in order to achieve the maximum conversion of natural resources into usable energy (capital). Taylor writes,

> We can see our forests vanishing, our water-powers going to waste, our soil being carried by floods into the sea; and the end of our coal is in sight. But our larger wastes of human effort…are less visible, less tangible, and are but vaguely appreciated.[50]

At this time, scientific theories of the universality of energy were popular; they held that the energy produced by the human body was equal to that of any other system of energy—animal or natural resource.[51] These new theories removed the distinction between the work of the labourer and the output of the labourer. By this principle, the human body ought to be able to produce an energy output at the same threshold as, for example, a machine. By this logic Taylorism targeted the body of the labourer as the most important site of inefficiency, and, therefore, the principle obstacle to the speed of progress. By addressing the human body as the root cause of all inefficiency, Taylor believed he could eliminate all impediments that slowed the speed of progress.

Taylor's system revolutionized the factory by standardizing parts and labour. According to art historian Maria Gough,

> Taylor based his system on individual case studies of industrial operations. Each case broke down a given operation (such as, for example, the shovelling of pig-iron) into its smallest components, then standardized and rearranged these components into their most efficient combination, thereby arriving at the "one best way" in which workers could perform the operation. By eliminating arbitrary or inefficient motions, the Taylor system increased production and reduced operating costs,

[50] Frederick Winslow Taylor, *The Principles of Scientific Management* (New York: Harper & Brothers Publishers, 1914), 5.
[51] Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (New York: Basic Books, 1990), 2–3, 45.

> thereby leading to greater profits for the factory owner (and, presumably, wages for the factory worker).[52]

This system linked productivity with wages by managing the speed and output of individual workers; this allowed for greater productivity in a shorter period of time. Taylor employed time and motion studies in order to set the target for labour speed and output; however, the target was always moving, always increasing with greater efficiency. His system effectively shifted control of the factory from floor-level, skilled foremen to upper-management engineers whose expertise was the medium in which the new factory vocabulary was being written. Instead of hiring and developing skilled labourers as before, the new system eliminated the need for the expertise of the skilled worker, replacing skill with small, repetitive, standardized movements that anyone could be taught to perform.[53] In Taylor's words, "…maximum prosperity can exist only as the result of maximum productivity;"[54] Taylorism was designed for, and to create, a society which would require an ever-increasing level of productivity of labour (speed) in order to realize maximum prosperity.

By Taylor's logic, predicated on the science of universal energy, 'maximum productivity' and 'maximum prosperity' are red herrings, for the actual thresholds of both terms were always increasing. The logic of the system set by Taylor—maximum productivity equals maximum prosperity—is decidedly elusive; the equation fails to delineate when either maximum productivity or prosperity are actually reached. This failure of logic did not prevent Taylor from trying to achieve the maximum. In order to achieve maximum productivity, and subsequently

[52] Maria Gough, "Production," in *Speed Limits*, ed. Jeffery T, Schnapp and Timothy L. Alborn (Montréal: the Canadian Centre for Architecture, 2009), 105–106.
[53] Rabinbach, *The Human Motor*, 239.
[54] Taylor, *The Principles of Scientific Management,* 12.

maximum prosperity, Taylorism addressed the inefficiencies of the current factory system. Given that machines never tire, nor require sleep or rest, inefficiency in the factory system was traced back to the human body, the site of fatigue. The difference between man and machine—fatigue—was the number one obstacle to twentieth-century progress.[55]

Fatigue was a popular concept not exclusive to Taylor's scientific management. In his book *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (1990), historian Anson Rabinbach traces this modern fatigue back to Friedrich Nietzsche in 1888; Rabinbach writes, "[Nietzche's] characterization of the epoch by the metaphor of fatigue was symptomatic of a general fear shared by the European middles classes that humanity was depleting its accumulated energy and falling into that sleep, which was 'only a symbol of a much deeper and longer *compulsion to rest*.'"[56] Rabinbach asserts, "For Nietzsche, as for many nineteenth-century thinkers, fatigue was identified with modernity itself;"[57] Rabinbach continues:

> Fatigue encapsulated…the paradoxes of modernity: Was not material progress undermined by the unreasonable demands that it made on the body and spirit? Did not scientific and technological advances produce a dark underside in the physical and psychological exhaustion of modern life? The nineteenth-century obsession with fatigue, both metaphoric and real, located in nature, in the body, and in the psyche the negative dimension of the considerable energies required to service the new productive forces unleashed by nature and harnessed by society.[58]

For the likes of Taylor and his contemporary Frank B. Gilbreth, fatigue was used to describe any kind of behaviour that resulted in a less-than-maximum

[55] Taylor, *The Principles of Scientific Management,* 5–6; Rabinbach, *The Human Motor*, 2–10; Frank B. Gilbreth, *Applied Motion Study: A Collection of Papers on the Efficient Method to Industrial Preparedness* (New York: The MacMillan Company, 1919), 7.
[56] Rabinbach, *The Human Motor,* 19.
[57] Rabinbach, *The Human Motor,* 19.
[58] Rabinbach, *The Human Motor,* 20.

level of productivity.[59] Fatigue, it was reasoned, may be caused by psychological, physical, or social obstacles both inside and outside of the factory.[60] Boredom and physical exhaustion were the most prominent forms of fatigue that plagued the factory system and both caused and exacerbated inefficiency. Taylor and proponents of scientific management sought to identify and eliminate all forms of inefficiency and fatigue in the factory system in order to achieve maximum productivity and subsequently maximum prosperity,[61] for as Rabinbach writes, "Exhaustion was the constant nemesis of the idea of progress, the great fear of the 'Age of Capital.'"[62]

Frank B. Gilbreth (1868–1924), another important proponent of scientific management, used photography as a tool to eliminate inefficiency (or waste as he called it) in physical labour.[63] Gilbreth was a consulting management engineer and member of the American Society of Mechanical Engineers, and over the course of the 1910s, he had been conducting what he called Motion Study research. His book, *Applied Motion Study: A Collection of Papers on the Efficient Method to Industrial Preparedness*, published in 1919, was a collection of essays and papers he had presented to, or published in, various engineering associations and journals. Like Taylor, Gilbreth identified fatigue and inefficiency in the human body as the most important obstacles to maximum productivity. He wrote, "There is no waste of any kind in the world that equals the waste of needless, ill-directed, and ineffective motions, and their resulting unnecessary

[59] Gilbreth, *Applied Motion Study,* 14–15.
[60] Taylor, *The Principles of Scientific Management*, 12–13.
[61] Gilbreth, *Applied Motion Study,* 7; Taylor, *The Principles of Scientific Management*, 10.
[62] Rabinbach, *The Human Motor,* 19.
[63] Frank Gilbreth and Frederick Winslow Taylor were alternately and sometimes simultaneously professional admirers and critics throughout their respective careers.

fatigue."[64] Gilbreth sought to improve efficiency by eliminating unnecessary or wasteful movements involved in the action of physical tasks. In order to do so he employed photography to capture and study the human motions involved in performing a task; no task— from typing to folding a cloth—was too big, too small, nor too insignificant to produce fatigue. Gilbreth's photographic technique involved attaching a light source to the head and related bodily appendage(s) (for example the hands) of the subject performing the task and then photographing the performance of the action in a dark room on a long exposure, thereby capturing the movement of the head and appendage(s) of the subject as a blur of light in the final photograph (Figure 1.4). Gilbreth then created a physical model from the photograph (Figure 1.5). Inefficient motion, which caused slowness, was captured in the photograph and eliminated in the model. Speed could therefore be measured by the number and organization of motions undertaken by the subject in order to complete a task: the more blurry the photograph, the less efficient the action, and the higher the rate of fatigue in the subject.[65]

Rabinbach employs the metaphor of the human motor in order to explore the social, political and economic implications of the widespread study of the physical motions of the human body in the late nineteenth and early twentieth centuries. Rabinbach focuses mainly on Europeans (such as French photographer Étienne-Jules Marey) working in this field, which he terms the Science of Work; however he also addresses Taylorism as the American model by which the same issues of the human body were being examined. By tracing the roots of this field and subsequent popularization of it, Rabinbach provides ample context for, and examples of, the widespread dissemination in Europe and

[64] Gilbreth, *Applied Motion Study,* 41.
[65] Gilbreth, *Applied Motion Study*, 46.

North America of the likening of the human body to the functions and operations of industrial machines (motors). Rabinbach writes:

> The dynamic language of energy was…central to many utopian social and political ideologies of the early twentieth century: Taylorism, bolshevism, and fascism. All of these movements, though in different ways, viewed the worker as a machine capable of infinite productivity and, if possessed with true consciousness, resistant to fatigue. These movements conceived of the body both as a productive force and as a political instrument whose energies could be subjected to scientifically designed systems of organization.[66]

In order to convey to the reader the popularity and promiscuity of the metaphor of the human motor in the late nineteenth and early twentieth centuries, Rabinbach establishes the wide spectrum of political groups that embraced the concept of man as machine. Furthermore, he asserts that the human body was perceived as a site of energy conversion; therefore it was subject to the same kinds of systems of organization as a machine. It followed, according to Rabinbach, that in the nineteenth century, the distinctions between man and machine were no longer as clear as they once had been; without such distinctions the human body was left to be described in mechanical terms, the language of the engineer, as we have seen. He writes, "The human body and the industrial machine were both motors that converted energy into mechanical work…all of nature exhibited the same protean qualities as the machine."[67] It was the establishment of "the dynamic language of energy," which provided the formula for the equation of man as machine.

In the Science of Work, an emerging discipline in nineteenth-century Europe which undertook the study of human motions with the aim of eliminating

[66] Rabinbach, *The Human Motor,* 2.
[67] Rabinbach, *The Human Motor,* 2.

fatigue, the human was found wanting and the machine was the ideal model of efficiency. Rabinbach writes,

> If the working body was a motor, some scientists reasoned, it might even be possible to eliminate the stubborn resistance to perpetual work that distinguished the human body from a machine. If fatigue, the endemic disorder of industrial society, could be analyzed and overcome, the last obstacle to progress would be eliminated.[68]

Progress is a force that demands the maximum output of energy, subsequently requiring the maximum speed of labour; progress is therefore the drive to eliminate inefficiency in order to drive forward production and output. By these standards, "the maximum" was a threshold always yet to be achieved, and the human body would never arrive at it because progress assumes a future moment in time, it is always out of reach.

The European field of motion studies, the Science of Work, and the American system, Taylorism, were both looking for solutions to inefficiency and fatigue in the human body; however, they went about it in different ways. Rabinbach distinguishes the two movements as follows: the Science of Work placed the expertise in the hands of scientists and academics who hoped to find a solution to energy loss for the betterment of all of society, whereas Taylorism placed the expertise in the hands of engineers and sought a solution to energy loss for a higher capital yield.[69] Both, however, were keenly focused on the drive for progress and the desire for efficiency, and both believed that the solution lay in the perceived problem of the human body.

Modern physics opened the door to Taylorism and the Science of Work. Ushered in during the nineteenth century, modern physics provided universal

[68] Rabinbach, *The Human Motor,* 2.
[69] Rabinbach, *The Human Motor,* 243.

laws of energy that placed the human body into question; the development and dissemination of the first two laws of thermodynamics addressed the constant nature of energy and its entropic tendencies, respectively. In 1847 the German physicist and physiologist Hermann von Helmholtz developed the universal law of the conservation of energy (the first law of thermodynamics). This law holds "that the forces of nature (mechanical, electrical, chemical, and so forth) are forms of a single universal energy, or *Kraft*, that cannot be either added to, [created] or destroyed."[70] To put it in a different way, the total amount of energy in an isolated system remains constant over time. It may change form over time (kinetic to chemical, for example) but it can never be added to or destroyed.

In 1850, the second law of thermodynamics, the law of entropy, was introduced by Rudolf Clausius, a German physicist and mathematician. This law states that "…in any isolated system the transfer of energy from a warmer to a colder body is accompanied by a decrease in total available energy."[71] Rabinbach points out that the discovery of the second law of thermodynamics placed the first in a sobering context: "there was an inevitable dissipation of force, that only a fraction of the total existing energy [in a system] is available for conversion and that 'the entropy of the universe tends to a maximum.'"[72] In addition to the scientific, political, social, and economic possibilities that had accompanied the certainty of a universal energy, the inevitability of decline, dissolution, and exhaustion was now an inescapable result.

The principles of modern physics, especially in relation to quantifiability, were at the heart of French philosopher Henri Bergson's (1859–1941) concept of

[70] Rabinbach, *The Human Motor,* 3.
[71] Rabinbach, *The Human Motor,* 3.
[72] Rabinbach, *The Human Motor,* 3.

time. Suzanne Guerlac, a specialist in nineteenth- and twentieth- century French literature and philosophy, states that Bergson was "keenly interested in the scientific developments of his day and fully appreciated the ways in which science and technology were dramatically transforming the modern world."[73] Early in his career Bergson began to develop a theory of duration in order to articulate what he felt was the crisis that modern science had affected on human experience. Having trained as a mathematician at the École Normale Supérieure in Paris in the late 1860s and 1870s, Bergson credited his mathematical studies with "[stirring his] interest in duration…"[74] Duration became Bergson's term for temporality.[75]

Beginning with his doctoral thesis entitled, "Time and Free Will: An Essay on the Immediate Data of Consciousness" in 1910, Bergson developed his theory of duration throughout his entire career in publications and lectures. Due to the extensive literature he published and presented relating to duration, I have chosen to primarily employ contemporary secondary sources in my analysis and examination of Bergson's theory of duration. Mark Antliff, an art historian specializing in the European avant-garde, has published a book, three articles, and two encyclopaedia entries on Bergson. Antliff focuses primarily on avant-garde European artists' engagement with Bergson's theory of duration. I am also employing Suzanne Guerlac's *Thinking in Time: An Introduction to Bergson*, a text which includes an analysis of Bergson's theory, as well as biographical facts and historical context for Bergson and his theory.

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[73] Suzanne Guerlac, *Thinking in Time: An Introduction to Henri Bergson* (Ithica: Cornell University Press, 2006), 42.
[74] Bergson quoted in Guerlac, *Thinking in Time,* 2, from F. C. T. Moore, *Bergson: Thinking Backwards* (Cambridge: Cambridge University Press, 1996), 63.
[75] Mark Antliff, "Creative Time: Bergson and European Modernism," in *Tempus Fugit: Time Flies*, ed. Jan Schall (Kansas: Nelson-Atkins Museum of Art, 2000), 37.

Bergson described duration as a vertical continuum, where mind and matter stand at either end; Antliff writes, "matter is simply 'the lowest state of mind' and mind 'the highest state of matter.'"[76] Concrete experience, man's temporal experience, is made up of a mixture of time and space and can be measured in what Bergson called "degrees of extensity."[77] Extensity is "the unfolding of duration into space."[78] Concrete experiences unfold along the continuum between mind and matter; temporal reality is composed of a mixture of time and space, and degrees of mind and matter.

Bergson divides human consciousness into two faculties, the intellectual and the intuitive, in order to describe how humans move along the continuum between mind and matter. Antliff writes, "Bergson separated intellectual modes of inquiry from the faculty of intuition…," where the faculty of the intellect was related to scientific modes of inquiry, and the faculty of intuition was related to "artistic perception and metaphysical modes of inquiry."[79] Intellectual time, "the time of science," "is a mathematical conception, symbolized as a unit of measure by our clocks and chronometers."[80] The quantitative nature of such measuring devices grounds scientific time (intellectual time) in space and threatens to remove mind from matter; Bergson writes, "the more consciousness is intellectualized, the more matter is spatialized;"[81] to put it in a different way, scientific time—a measure of human experience that privileges the intellect rather than the faculty of intuition—has the potential to extend duration so far into the

[76] Mark Antliff, "Shaping Duration: Bergson and Modern Sculpture," *The European Legacy* 16, no. 7 (2011): 905.
[77] Antliff, "Shaping Duration," 905.
[78] Antliff, "Shaping Duration," 905.
[79] Antliff, "Creative Time," 37.
[80] Antliff, "Creative Time," 38.
[81] Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell. 1911. Reprint. (Waiheke Island: Floating Press, 2009), 189.

spatial realm that quantitative properties would be all that remained of the temporal experience.[82] Therefore, intellectual time is not a true reflection of our inner beings; by extending concrete experience into space and eliminating mind from matter, intellectual time gives a fragmented view of our true beings.[83] Antliff writes, "Bergson believed that [the scientific/intellectual] symbols or units distort rather than reflect our inner experience of time; they satisfy the impersonal, practical conception of time which regulates society, but are inadequate as symbols of our individual, felt experience of time."[84]

Guerlac writes that Bergson feared that intellectual, or scientific, time risked "overstepping its bounds and of trying to explain what it could never understand,"[85] natural phenomena. Bergson believed that the faculty of intellect governed human consciousness; Antliff writes, "were we to transform our state of psychological tension into one of relaxation, intuitive consciousness would give way to the pragmatic designs of our intellect…"[86] Only through an effort of intuition could human consciousness transcend the intellect.[87] This effort of intuition is inherently a free act; rather than passively giving in to 'the pragmatic designs of our intellect,' intuition requires an active, free, act. Antliff writes, "the free act, as a reflection of the profound self, is at the same time both a conscious act and one deeply imbued with feeling…In order to act artistically, Bergsonian artists must first take up a sympathetic attitude with regard to their own being."[88] Where the intellectual faculty focuses on the superficial image of the self—or, alternatively, on the surface of an object—instead of plumbing the depths of the

[82] Antliff, "Creative Time," 38; Antliff, "Shaping Duration," 905.
[83] Antliff, "Creative Time," 38.
[84] Antliff, "Creative Time," 38.
[85] Antliff, "Creative Time," 42.
[86] Antliff, "Shaping Duration," 905.
[87] Antliff, "Shaping Duration," 905.
[88] Antliff, "Creative Time," 38.

inner self (or the durational qualities of an object), the faculty of intuition requires us to take up a sympathetic position to ourselves and our surroundings.[89] Sympathy is the position "by which one is transported into the interior of an object in order to coincide with what there is unique about it."[90] Antliff writes, "By transcending the intellect's passive, fragmentary view of the self, one experiences the self in the process of self-creating, that is, free activity."[91]

> Writing of Bergson's attitude toward intellectual time, Guerlac states:
>
> He suggests that our static conception of time is a defence against the heterogeneity of the real…It presents an immobile world for us to master, projecting our thought through a grid of space, thrown out, Bergson says, like a net to collect and organize the heterogeneous and dynamic real, so that we can better act upon it and take control of it.[92]

According to Guerlac, the pragmatic designs of our intellect are defences against the heterogeneity of the real. The homogenization that occurs when the intellect is privileged, whereby time is represented by units of measurement—such as minutes on a clock—is a response to an anxiety produced by the uncontrollable heterogeneity of concrete experience. The minutes on a clock are like a net that collects and organizes the heterogeneity of duration so that we may immobilize and control it, so that we may stabilize time. All of the individual, nuanced sensations that subtly form the temporal flow of time are transformed into equivalent units, ready to accumulate so they can be counted. In order to accumulate—in order to be counted—the equivalent units must be grounded in the material world, so that they may extend into space.

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[89] Antliff, "Creative Time," 38; Antliff, "Shaping Duration," 905.
[90] Henri Bergson, *An Introduction to Metaphysics*, trans. T. E. Hume (New York: Putnam's, 1912), 159.
[91] Antliff, "Creative Time," 38.
[92] Guerlac, *Thinking in Time,* 2.

If we return to the FMC's exhibit we may see the superficial, homogenized representation of intellectual time. The assembly line exhibit presents an enactment of man's mastery over the force of time, of his ability to immobilize and stabilize it. The assembly line display enacts an extensive model of time. Duration is composed of a mixture of time and space, measured along a continuum of mind and matter and the assembly line models matter drained of its durational qualities and extended into space.[93] Every day for three hours, the workers re-enacted the same performance, re-modeling a concept of time as a force that moves forward; that can be objectively quantified; that has a monetary value; and that can be repeated over and over again exactly. The workers turned out one automobile every ten minutes for three hours every day. They attached interchangeable parts to an at once incomprehensible mechanical object. They proceeded to move the object forward along a straight line attaching more and more interchangeable parts to it until it was finished and was identifiably a completed automobile. The automobiles were assembled, theoretically at least, the exact same way and at the exact same time every day: each part attached at the same time; each car completed at the same time; each action performed at the same time; and each assemblage taking the same time to accomplish. Parts and labour were homogenized; even the workers were standardized in their identical uniforms, while they performed the same simple tasks every day. The automobiles along the assembly line form a progression of units; these units, one after another, model a spacialization of time.

In repose, when the labourers (or performers) and spectators have gone (Figure 1.3), the assembly line is still enacting this homogenization: the tools and

[93] Antliff, "Shaping Duration," 905.

parts are laid out and the cars are organized from incomplete to complete, from left to right, waiting to be completed, waiting to be counted, frozen in action. In the performance of the assembly line, time becomes the unit by which the construction of a car is measured and by which speed can be identified and celebrated. Time is described as the unit by which each part is attached, each task accomplished, each product completed, and each performance measured. The assembly line display provided a scientific representation of time, composed of homogenized units that privileged the intellect. That is to say, this representation of time enacts what Bergson calls "a net to collect and organize the heterogeneous and dynamic real, so that we can better act upon it and take control of it;"[94] it immobilizes the temporal flow of time. According to Bergson, movement was a derivative of space; the intellectual faculty of consciousness imagines movement as a fixed entity, but the intuitive faculty knows it to be "multivalent."[95] The FMC's assembly line display imagines movement as a fixed entity; time and speed are spatialized, thereby immobilizing them.

In the images depicting the automobiles within diverse American landscapes that bordered the top of the exhibition walls, to the assembly line in action and also in the photographs showing the exhibit in repose (Figure 1.3), the exhibit not only displayed the mastery of the Ford Motor Company over the powerful, ontologically flat force of time, but it also offered the promise of active agency in the overly-fast modern world. Each car endowed the consumer with this agency; by taking control of the wheel of the automobile, the consumer could take control of time by embracing speed and the machine. With a Ford car, instead of feeling helplessly propelled through time and space, the individual

[94] Guerlac, *Thinking in Time,* 2.
[95] Antliff, "Creative Time," 39.

could propel himself. The Ford display promised the consumer that the automobile would liberate the individual from the seemingly uncontrollable forward propulsion and speed of modern life; the assembly line asserted that freedom could be achieved by embracing mechanization and the American capitalist system. But the freedom promised by the Ford assembly line was a façade; it created a seductive narrative that the liberation of man from technology could be achieved through technology. In Bergsonian terms, the liberation that the assembly line promised was empty of a connection to intuitive time, by which man might find a connection to the true nature of our inner beings. There is no freedom in intellectual time, only passivity; freedom can only be achieved through an effort of intuition. The promise of progress through a culture of speed is revealed to be false. Rather than providing evidence of the physical performance of the assembly line, *Where an Automobile was Born Every Ten Minutes* (Figure 1.2), the photograph, tells a different story. The completed automobile in the foreground obscures the series of incomplete machines behind it; only the end result of the assembly line is captured. Instead of providing a reference to the quantitative message of the assembly line, the content of the photograph rejects intellectual time. The automobiles blend into each other instead of standing apart as equivalent units; it is thereby impossible for the automobiles to accumulate.

Just as Bergson's theory of duration reveals the promise of Ford's assembly line display—liberation through the embrace of speed and machine technology—to be false, Walter Benjamin's "These on the Philosophy of History," (1940), demonstrates a similar falsity embedded in a modern conception of progress. Benjamin (1892-1940), a German philosopher, critic, and essayist working in the early twentieth century, describes history as an external

representation of time and a reaction to the anxiety of the speed of modernity. In his essay, Benjamin expounds his theory of history most compellingly through the allegory of the angel of history. He describes the angel:

> His eyes are staring, his mouth is open, his wings are spread. This is how one pictures the angel of history. His face is turned toward the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed. But a storm is blowing from Paradise; it has got caught in his wings with such violence that the angel can no longer close them. The storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress.[96]

The angel desires to "stay, awaken the dead, and make whole what has been smashed," however he is thwarted by the force of progress and so the pile of debris rises higher, accumulates more fragments. The assembly line enacts a spectacle of desire in which seemingly disparate fragments are homogenized and assembled in an organized fashion (by pacified bodies) into consumable objects of desire, vehicles of supposed liberation. This is the work of history in Benjamin's allegory: the collection of fragments of the past, organized into a logical structure (narrative). Both the FMC's assembly line display and Benjamin's allegory are reactions against the heterogeneity of Bergsonian duration.

Philosopher Stéphane Mosès, referencing Paul Klee's *Angelus Novus* of 1920 (Figure 1.6), from which Benjamin drew inspiration, writes in 1992, that "the scene represents a violent, irresistible movement that Benjamin interpreted as

[96] Walter Benjamin, "These on the Philosophy of History (1940)," in *Illuminations: Essays and Reflections* (New York: Schoken Books, 2007), 257–258.

the image of humanity reluctantly carried toward a future that horrifies it."[97] The body of the angel is rendered impotent against the speed of progress because it cannot address its desire to "make whole the fragments," to stabilize time. The anxiety produced by the ever-accumulating fragments acts as an all-consuming drive to stay, to combat the speed of progress pushing against the angel's wings, to completely arrest the temporal flow of time. Mosès writes, "the only object of grammatical present found…here is to freeze movement, to immobilize the Angel not in the perfection of a moment removed from the vicissitudes of time but, on the contrary, in the fossilization of an electable horror." "The Angel," continues Mosès, "is gripped for an eternity in a gesture of horror…This present is the opposite of the renewal and invention; it is the present of repetition, course, inescapable glaciation."[98]

The work of history is to make whole the fragments in order to stabilize temporal reality; however the angel of history cannot accomplish the task because the speed of progress has rendered its body impotent in the propulsion forward. The angel cannot close his wings; his body is rendered useless in the power of the forward propulsion. The technology of his own body renders him useless in the same way that at the turn-of-the-century, machine technology threatened to render the human body obsolete. Scientific management and the Science of Work sought a solution to the limitations of the human body. According to the principles of scientific management, the human body, like the angel, had been rendered impotent by the flurry of modern progress. In order to master the power and speed with which progress rendered the human body

[97] Stéphane Mosès, "The Angel of History," in *The Angel of History: Rosenzweig, Benjamin, Scholem*, trans. Barbara Hershaw (Stanford: Stanford University Press, 2009), 119.
[98] Mosès, "The Angel of History," 120.

impotent and pushed it farther and farther from the fragments that pile higher, Taylorism proposed a refashioning of the human body out of the stuff of progress: the self-contained machine, the motor. Only through this refashioning did Taylor believe the body could be equipped for the speed of progress. The technology with which humans operated their own bodies was externalized, scientifically analyzed, externally reproduced, and subsequently re-invested into the corpuses of the labourers through the work of Taylor and Gilbreth. The new hybrid body was supposed to be capable of moving with and against the onslaught of progress. The assembly line displayed man's mastery over time but also over his own body; man had made himself into an automaton without freedom, a fixed entity. In *Where an Automobile was Born Every Ten Minutes,* the figures of the labourers dissolve into the machinery of the assembly line. Their ghost-like impressions have left a residue on the photograph; they blend into the automobiles and the machinery parts, but are barely distinguishable from them; they are ontologically undifferentiated from the machine products and parts of their labour. Their labour is almost invisible in the photograph; the action of their labour renders them ghost-like. The only discernible difference in the photograph is between labourers and spectators.

The spectators are gathered behind the railing. Their inert bodies face the action of the display, enacting a false relationship to time that Bergson tried to uncover in his writing: they watch and stand still while time moves forward. It would not be a stretch to imagine these men counting the automobiles as they roll by; they are in a privileged position to be able to count. Their gaze immobilizes and stabilizes temporal reality. The railing sets them apart and gives them the distance to be able to perceive the line of incomplete machines all at

once; in their gaze they gather the equivalent units, composed of labour, labourer, and machines parts. Like the angel of history, the spectators are in a position to perceive the fragments of time; however, not only are the fragments removed from the temporal flow, but so are the spectators. Furthermore, there is no catastrophe to witness; instead there is a performance of assemblage—the fragments accumulate in a logical fashion—and at the end, instead of a large pile of debris, there is a shiny, new automobile. The assembly line pacifies the anxiety of modern progress by mobilizing the spectators into consumers, homogenizing labour and labourer and transforming the fragments of modern time into commodities. Anxiety becomes desire. The automobile, produced at the end of the assembly line turns the fears of the spectators into a product, which promises to liberate them from the horror, anxiety and impotence of modern life. The processes by which fragments of machine become a consumable object are repeated in the display as if unending. It appears to produce a never-ending supply of cars. The product (commodity) accumulates.

The material reality of the photograph *Where an Automobile Was Born Every Ten Minutes* (and all photographs) is a testament to the desire to fix time, to immobilize it with our gaze. As Susan Sontag writes, "…the force of photographic images comes from their being material realities in their own right, richly informative deposits left in the wake of whatever emitted them, potent means for turning the tables on reality—for turning *it* into a shadow…they are an unlimited resource, one that cannot be exhausted by consumerist waste…"[99] The photograph accumulates.

[99] Susan Sontag, *On Photography* (London: Penguin Books, 1971), 180.

The spectators are mobilized by a desire for liberation from the speed of modern time. In the Ford exhibit they have been promised that modern technology will liberate them from the overwhelming speed of progress; however, there is no liberation. Instead, the spectators have been mobilized by technology as consumers with an infinite capacity for consumption. The consumers accumulate. Likewise, the producers become the product; the technology by which they operate their own bodies is physically redesigned into a standardized technology, while the labour of their actions is indistinguishable from the product in the photograph. Furthermore, were Taylorism to succeed in, metaphorically, restoring function to the angel's wings, thereby allowing the angel to attend to the pile of debris, the angel would be no closer to the true nature of time. This is the fallacy of progress, imposing order is not liberation, nor does it provide a connection to the true nature of technology, the human, or time. In order to enter into a free relationship with time, both Bergson and Benjamin argue for an embrace of the heterogeneous real. Ford represents progress as an unending repetition, a performance of desire and consumption; Mosès writes, "the Angel of History is the prisoner of an eternal catastrophe, an irremediable perversion of time, condemned to the endless repetition of the same tragedy."[100] Progress is a false promise; the externalization of time cannot help but result in accumulation.

[100] Mosès, "The Angel of History," 120.

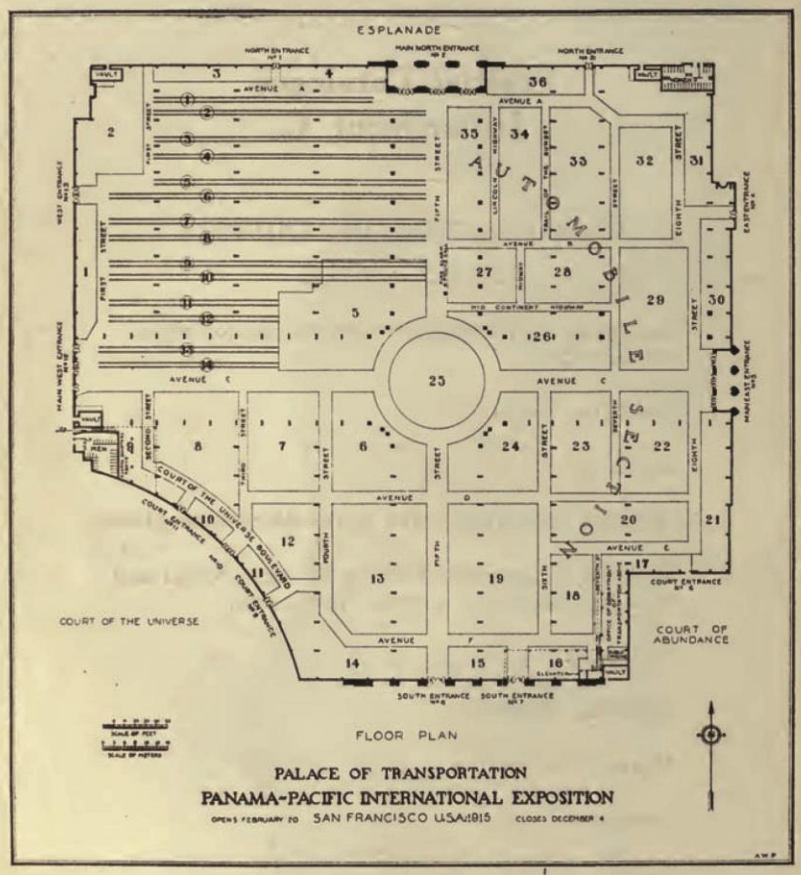


Figure 1.1 “Floor plan of the Palace of Transportation, Panama-Pacific Internatioanl Exposition,” in *Official Catalogue of Exhibitors, Palace of Transportation*, 7. San Francisco: Panama-Pacific International Exposition, 1915 (Source: Internet Archive).

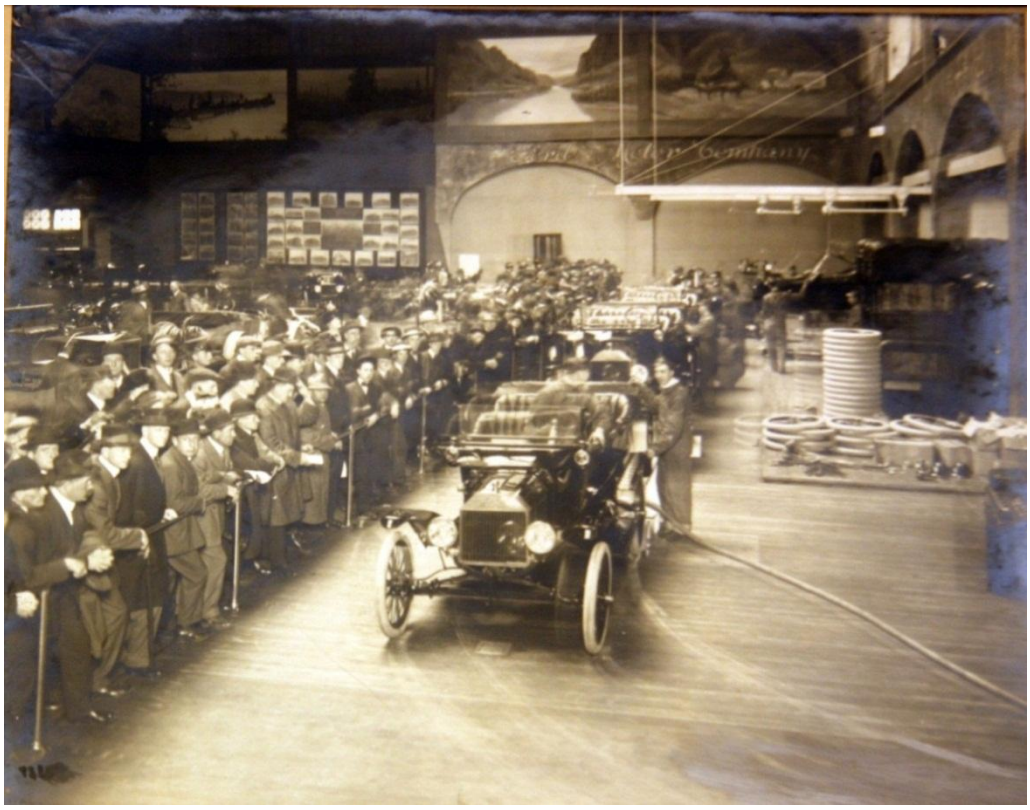
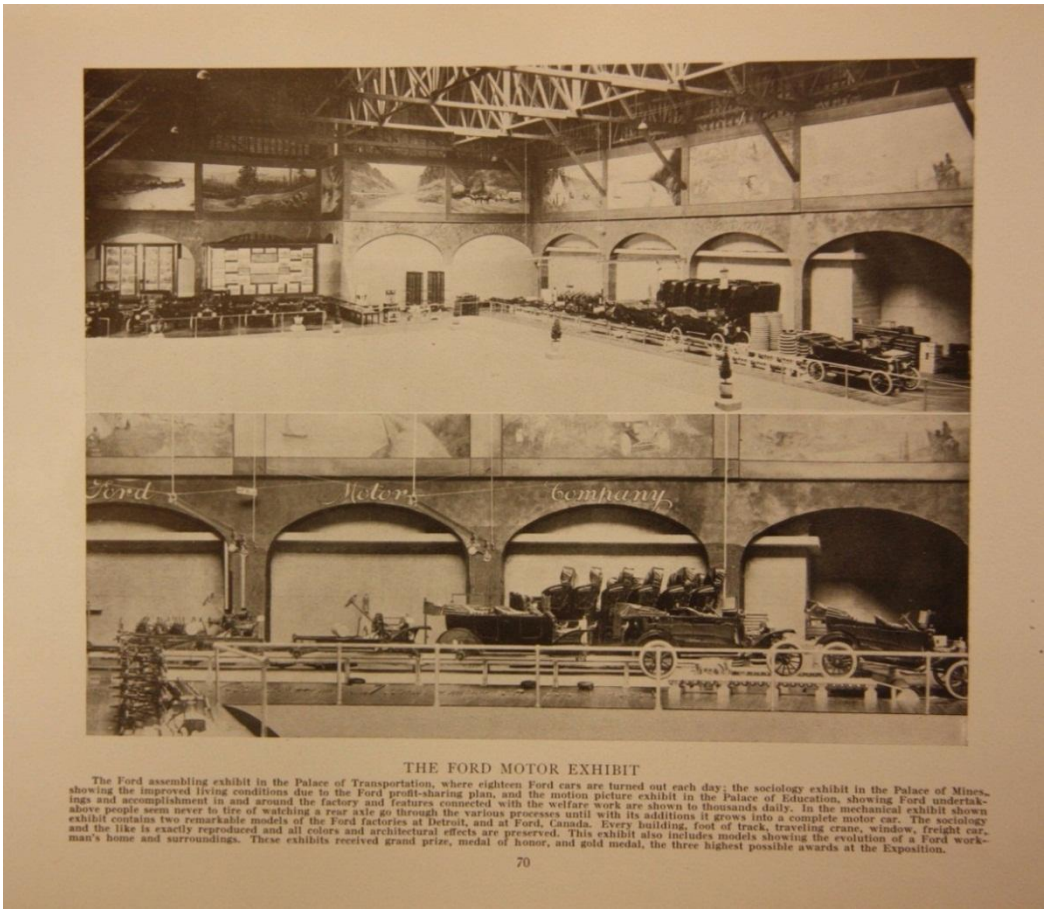


Figure 1.2 Unknown Photographer, *Where an Automobile was Born Every Ten Minutes; Henry Ford's Concession, Palace of Transportation,* photograph, 1915, Panama-Pacific International Exposition, San Francisco, collection of the San Francisco Public Library, San Francisco (Photo: author).



THE FORD MOTOR EXHIBIT

The Ford assembling exhibit in the Palace of Transportation, where eighteen Ford cars are turned out each day; the sociology exhibit in the Palace of Mines, showing the improved living conditions due to the Ford profit-sharing plan, and the motion picture exhibit in the Palace of Education, showing Ford undertakings and accomplishment in and around the factory and features connected with the welfare work are shown to thousands daily. In the mechanical exhibit shown above people seem never to tire of watching a rear axle go through the various processes until with its additions it grows into a complete motor car. The sociology exhibit contains two remarkable models of the Ford factories at Detroit, and at Ford, Canada. Every building, foot of track, traveling crane, window, freight car, and the like is exactly reproduced and all colors and architectural effects are preserved. This exhibit also includes models showing the evolution of a Ford workman's home and surroundings. These exhibits received grand prize, medal of honor, and gold medal, the three highest possible awards at the Exposition.

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Figure 1.3 Photographer unknown, “The Ford Motor Exhibit,” photograph from *The Blue Book: A Comprehensive Official Souvenir View Book of the PPIE as San Francisco, 1915,* by Robert A. Reid, San Francisco, 1915, p. 70, collection of the Henry Madden Library, California State University, Fresno (Photo: author).

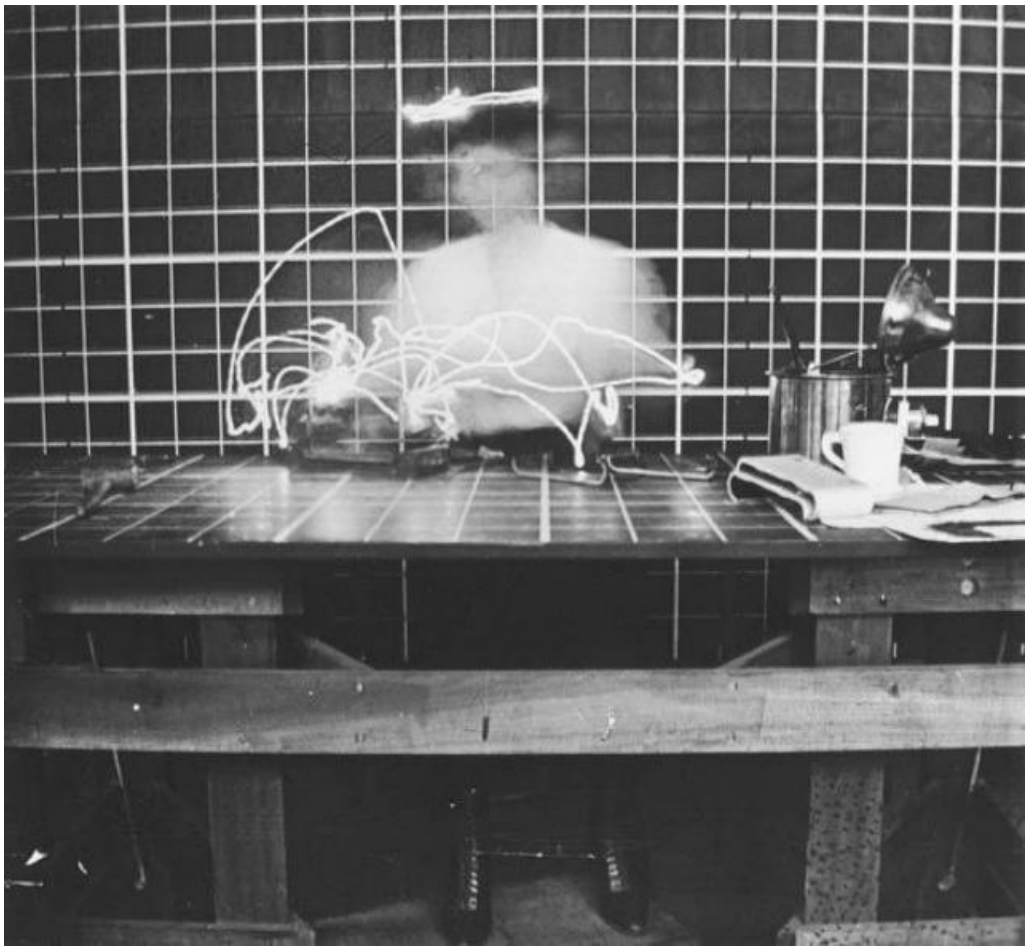

Figure 1.4 Frank Gilbreth, *Motion Efficiency Study*, c. 1914, gelatin silver print, National Museum of American History, Behring Center, Division of Work and Industry, Industry Collection, Image No. AFS 167
(Source: http://click.si.edu/Image.aspx?image=737&story=436&back=Story, last accessed September 17, 2012).

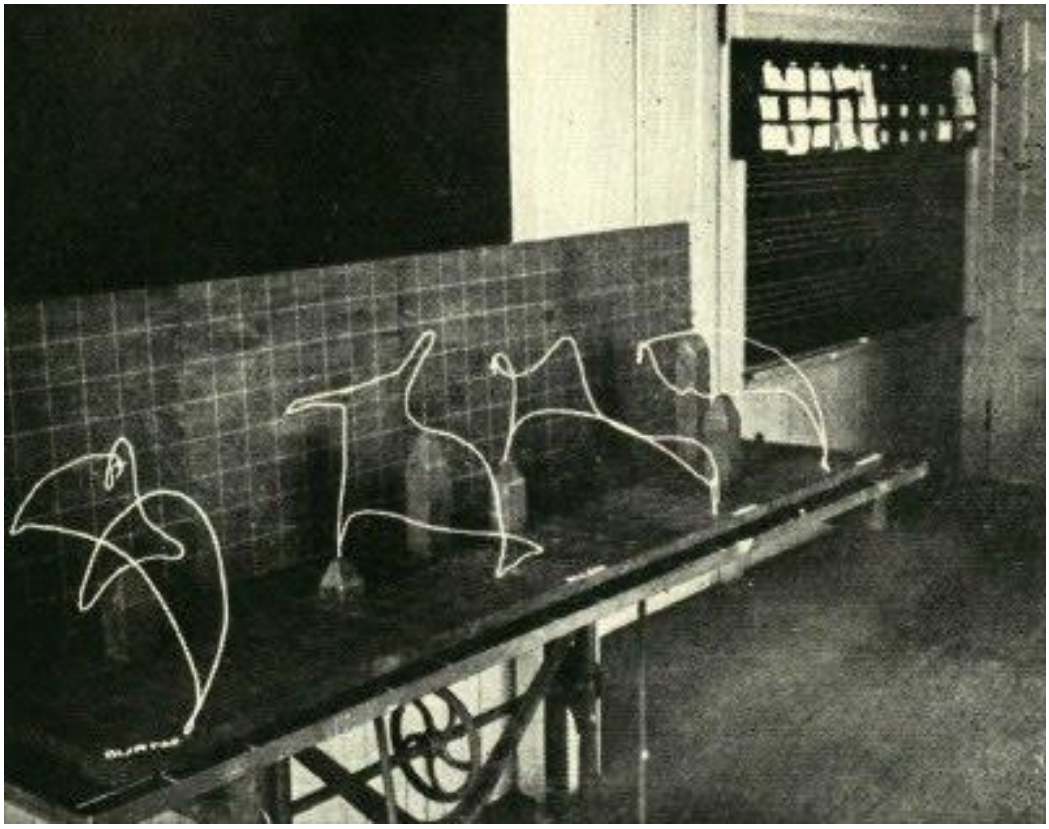

Figure 1.5 Frank B. Gilbreth, “First photograph of wire models showing one man’s progress of learning paths of least waste. These wires represent the paths of the left hand of a manager on a drill press, —a machine which he had not touched for twenty-five years,” photograph, 1919, in Frank B. Gilbreth, *Applied Motion Study: A Collection of Papers on the Efficient Method to Industrial Preparedness* (New York: The MacMillan Company, 1919), 90A (Photo: author).

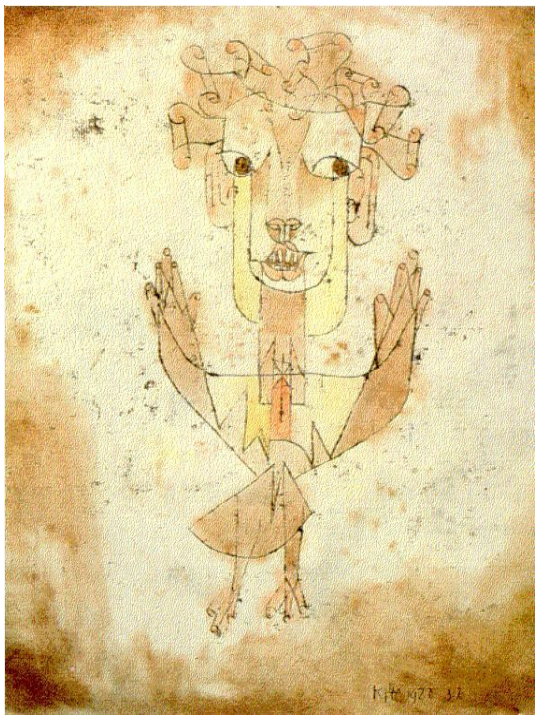

Figure 1.6 Paul Klee, *Angelus Novus*, print on paper, 1920, 31.8 x 24.2 cm. (Source: Artstor).

Chapter 2

Italian Futurism: Collision

Italian poet and writer Filippo Tommaso Marinetti (1876–1944) published "The Founding and Manifesto of Futurism" in the French newspaper, *Le Figaro,* February 20, 1909, introducing to the world a new literary movement of his own creation.[101] Marinetti expanded the movement to include, among other things, the visual arts one year later. Italian Futurist art was officially baptised in 1910 with the publication and public presentation of the "Manifesto of Futurist Painters." Marinetti, the leader of the movement, introduced to the world the Futurist artists: Umberto Boccioni, Carlo Carrà, and Luigi Russolo (Giacomo Balla and Gino Severini joined a little later, adding their names to the document). At the heart of Italian Futurism is the principle of renewal. Destruction, in their estimation, would yield the rejuvenation of art and life. In their first Manifesto of Futurist Painters, they wrote, "we declare war on all artists and all institutions which insist on hiding behind a façade of false modernity, while they are actually ensnared by tradition, academicism and, above all, a nauseating cerebral laziness."[102] Setting themselves against contemporary and historical Western art,[103] the Futurists painters and sculptors sought a "style of motion, a thing which has never been attempted before..."[104] In their effort to revive the plastic arts from the stagnation

[101] F. T. Marinetti, "The Founding and Manifesto of Futurism, 1909," in *Futurist Manifestos*, ed. Umbro Apollonio (Boston: MFA Publications, 1973).
[102] Umberto Boccioni, et al, "Manifesto of the Futurist Painters, 1910," in *Futurist Manifestos,* ed. Umbro Apollonio (Boston: MFA Publications, 2001, 1970), 25.
[103] Boccioni, et al, "Manifesto of Futurist Painters," 24.
[104] Umberto Boccioni, "The Italian Futurist Painters and Sculptors: Initiators of the Futurist Art," in *Catalogue Deluxe of the Department of Fine Arts, Panama-Pacific International Exposition*, ed. John E. D. Trask and J. Nilsen Laurvik (San Francisco: Paul Elder and Company, 1915), 123.

of the past, the Futurists sought to depict modern life as dynamic, colliding forces, rather than as "motionless, frozen [objects]."[105]

The Italian Futurists contributed fifty works of art to the Fine Arts Department's display at the PPIE (Figure 2.1).[106] This exhibition was significant for three reasons: Europe was at war making transportation across the Atlantic very difficult;[107] it was the first time the Italian Futurists exhibited in the United States; and it was the last time they exhibited together as a unified group[108]. The PPIE opened on February 20, 1915, to great success; however the Futurist exhibition, which received little publicity, was greeted with tepid critical reviews and was overlooked by most visitors.[109] Futurism's first visit to America was lacklustre, if not a complete failure.

The failure of Futurism to take hold in America at the PPIE is at first glance perplexing: firstly, the celebration of San Francisco's recovery after violent destruction parallels the Futurists' objective of renewal via destruction, and secondly, the PPIE's goal to display the newest, best, and most advanced modern technology aligns nicely with the Futurists' investment in modern technology and its ability to transform political and social life. It would seem that the Futurist exhibition was directly in-line with the major theme of the exposition; however, a lack of artistic context, an unfavourable critical atmosphere, and a misconception of "Futurism" in general all contributed to the indifferent responses

[105] Boccioni, "The Italian Futurist Painters and Sculptors," 123.
[106] This is the only photograph of the Futurist exhibition at the exposition that I have discovered.
[107] Anonymous, "Collecting Art Exhibits in War-Ridden Europe," *Review of Reviews* (April 1915): 462.
[108] Margaret R. Burke, "Futurism in America 1910-1917," MA thesis, University of Delaware, 1986, 59.
[109] Nancy Boas, "At the Fair: Chapter 3," in *Society of the Six* (San Francisco: Bedford Arts, 1988), 66.

and the lack of historical attention paid to Futurism in America in 1915. In this chapter I will first examine the artistic context and the critical reception of the Futurist exhibition at the PPIE in 1915. Following the review of criticism and scholarship related to the Futurist exhibition at the PPIE in 1915, I will then undertake an examination of Futurist art and writing from before World War I in order to examine the threat Futurism posed to American ideology. In addition to examining the art and writings of Umberto Boccioni, I will also analyse the "The Founding and Manifesto of Futurism, 1909," written by F. T. Marinetti, as this document was translated into English and published widely around the world as early as April 1909; excerpts of the Futurist Manifesto were even published in the *New York Sun* before 1915.[110] In so doing, I hope to provide context and insight into the failure of Futurism to take hold in America in 1915.

The overall program of the Department of Fine Arts at the Panama-Pacific International Exposition did not reflect the new developments in art (such as Futurism) which had been emerging in Europe since the beginning of the twentieth century; instead, "fairgoers found a huge but essentially conservative display consisting of an astounding 11,403 works arranged in fourteen sections"[111] in the Palace of Fine Arts and the Annex to the Palace of Fine Arts (Figures 2.2 and 2.3). The most popular works at the fair were paintings by the French and American Impressionists,[112] hardly new and already historic by Parisian and New York standards.[113] The program of the Department of Fine Arts

[110] John Oliver Hand, "Futurism in America: 1909-1914," in "Futurism," special issue, *Art Journal* Futurism 41, no. 4 (Winter, 1981), 337.
[111] Nancy Boas, "At the Fair," 58.
[112] Although there were only about sixty works representing the French Impressionists, they were a popular attraction. Boas, "At the Fair," 62.
[113] Paris at this time was certainly the centre of the newest, most avant-garde art and the centre with the most influential institutions (galleries, critics, etc.) New York had staged the Armoury Show in 1913—a major and historically important exhibition of European

at the PPIE, writes Nancy Boas in her study of modernism in California, "[emphasised]…American Impressionism and academic work of the sentimental and uplifting kind, which reflected the post-Victorian taste of most of the jurors;"[114] furthermore, Boas asserts that the program "was antithetical to the modernist aesthetic."[115] Only the Norwegian section with its nine works by Edvard Munch, for which John Nilsen Laurvik served as Commissioner of Fine Arts,[116] featured anything close to avant-garde art. There was almost nothing in the Palace of Fine Arts, nor in the entire Department of Fine Arts, that resembled or provided a context for the Futurist exhibition.

The Italian government sent a collection of artworks for an official national gallery at the PPIE, while the Futurists' "unofficial" collection was displayed in its own separate space, in the annex. The official offering of art from Italy was nothing like the Futurist's work; instead, it reflected the academic work favoured by the jury. Ettore Tito (1859–1941), a well-known Venetian painter, held a prominent position in the Italian exhibition as well as in the larger program of the Department of Fine Arts at the PPIE, winning the Grand Prize in painting. Trained in an academic style at the Accademia di Belle Arti in Venice, his subject matter and the manner in which it was rendered are conventional compared to the

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modern and avant-garde art works—and would arguably take over from Paris after World War II. California, up until this point, was struggling to foster an artistic and critical presence on the national and world stages. The PPIE's Department of Fine Arts had a stake in this ambition; however the program of art they presented was hardly new and the criticism (specifically from Californian critics—not New York critics) underdeveloped. Kevin Starr writes, "The experience of the 1880s and 1890s provided a usable lesson, albeit a negative one; for during this era California developed a generation of artists only to lose them to New York." Kevin Starr, "Chapter 9: The City Beautiful and the San Francisco Fair," in *Americans and the California Dream, 1850–1915* (Oxford: Oxford University Press, 1973), 301.

[114] Boas, "At the Fair," 63.

[115] Boas, "At the Fair," 59.

[116] In the *Catalogue Deluxe of the Department of Fine Arts, Panama-Pacific International Exposition* Laurvik is listed as a member of the International Jury of Awards for Norway. Trask and Laurvik, eds., *Catalogue Deluxe,* x.

Futurists, who were engaged in a project of breaking with tradition. Although John Nilsen Laurvik, in an article addressing the foreign paintings in the Department of Fine Arts, lists the strong modeling in Tito's *La Nascita di Venere (Birth of Venus)*, 1903 (Figure 2.4), as a "[hint] of more modern tendencies,"[117] it is a far cry from the figural abstraction and bold colours of the Futurist canvases.

A comparison between Tito's *La Nascita di Venere (Birth of Venus)* and Umberto Boccioni's (1882–1916) painting *Materia,* 1912 (Figure 2.5),[118] included in the Italian Futurist exhibition, gives further evidence of the difference in painting techniques used to depict the human form, while also providing insight into the visual literacy required to understand the Futurist works. Both are representations of the human form in paint on canvas; however, in comparison, the difference between the styles of the two artists is striking. Tito employs a colour palette reflective of the academic desire to objectively represent the natural world; for example, the skin tones of the nude figures in the painting are rendered in colours that reflect skin tones found in the natural world. Boccioni makes no such commitment to objective reality; unlike Tito's Venus, who can be immediately identified (because of her seemingly objective representation), Boccioni's figure is elusive. After a moment of gazing at *Materia*, the viewer may recognize certain features indicative of the human body; however, these markers are rendered in a palette of colors that fails to objectively represent the natural world. The figure's protruding hands are painted in red and black, while its arms are rendered in shades of green.

[117] Laurvik, "Notes on Foreign Paintings at the Panama-Pacific International Exposition," 357.
[118] Catalogue number 1142. PPIE, *Official Catalogue of the Department of Fine Arts, San Francsico, California, 1915* (San Francisco: The Wahlgreen Company, 1915), 109.

Tito employs sophisticated Renaissance-derived techniques to enhance the illusion of three-dimensional depth and space in his painting; the horizon line in the background of the image establishes an illusion of three dimensionality, and the female figure in the center of the painting overlaps both the putto (small, winged, baby-like figure) to her left and the horizon line, suggesting that she is in front of the putti and the horizon. Further still, her right knee is rendered using a foreshortening technique to give the illusion that her right knee is closer to the viewer than her right foot. These standard academic techniques are employed by Tito to ground his painting in objective reality. Boccioni employs no less sophisticated techniques in his painting, but the figure in *Materia* appears, in contrast to Tito's figures, as a disjointed, abstract representation of the human form, with little reference to objective reality. There is no horizon line to aid the viewer in establishing a connection to objective reality; instead the surface of the canvas is broken up into overlapping planes. Not only are these planes often at odds with one another, depicting different angles and perspective, but they also deny the possibility of three-dimensional space. In the top right-hand corner of *Materia*, three planes intersect and overlap at the same time; one cuts across the canvas vertically, the second horizontally, while the third, rendered in bright red, almost extends into three-dimensional space. They come together to simultaneously create and shatter three-dimensional illusion.

Lastly, the titles of the two works—*La Nascita di Venere (The Birth of Venus)* and *Materia (Matter)*—are both references to the creation of the work of art; however, one is couched within the academic tradition of a classical allegory of beauty, while the other references the creation of the universe and the material world itself. Tito's title grounds the viewer in a narrative subject, while Boccioni's

title is less structured, leaving the subject of his painting obscure. Viewers and critics anticipating, or trained to analyse, Tito's painting may have felt ill-equipped and frustrated in the Italian Futurist exhibition in front of, for example, Boccioni's *Materia*.

I have chosen to examine the work of Umberto Boccioni, one of the exhibiting Futurist artists, for the following reasons: I have the most complete record of the artworks he exhibited at the PPIE; unlike the other Futurist artists, he worked as both a painter and a sculptor; he wrote the essay that accompanied the exhibition and was published in *The Official Catalogue of the Department of Fine Arts, PPIE* (1915); he was a prolific writer of Futurist manifestos relating to the plastic arts; the work he sent to the PPIE is considered to be from his strongest period (Figure 2.5 and 2.6); and he died only a few years later. His death is considered by many as the end of the first phase of Futurism.[119]

[119] Before Futurism grew to encompass the plastic arts, it began as a literary movement. Marinetti published the first manifesto of Futurism in several Italian and foreign newspapers, most notoriously on the front page of the Parisian daily *Le Figaro*, on February 20, 1909. This inflammatory document called for the destruction of traditional values (except patriotism) and the rebuilding and refiguring of Italy from the ruins of the demolished past. According to the manifesto, only through the violence and destructive powers of war could Italy enter the future. Marinetti envisioned Futurism not only as a literary movement but also as the vehicle for the regeneration of Italy.

Marinetti continued to publish manifestos, poetry, and prose, while also expanding the scope of Futurism to include painting, sculpture, music, decorative arts, photography, typography, architecture, dance, theater, and film. In 1910, Marinetti welcomed a group of painters and sculptors into his fold, and together they composed and published the "Manifesto of Futurist Painters," in which they denounced the cult of the past in favour of modern life and scientific innovation. Although the Italian Futurist artists were all engaged in a project of social and artistic renewal, their individual styles were unique. Boccioni was especially prolific in the early years of the movement, generating many manifestos and essays on Futurist art and theory.

Boccioni's essay, "The Italian Futurist Painters and Sculptors: Initiators of the Futurist Art," was included in the official catalogue of the San Francisco exposition.[120] The essay begins:

> We may declare, without boasting, that the first exhibition of Italian Futurist painting, recently held in Paris and London, and now brought to San Francisco, is the most important exhibition of Italian painting which has hitherto been offered to the judgement of America.[121]

Writing in the first person plural, Boccioni's words take on great authority; he establishes the recent success of the group in Paris—then, the centre of the art world—before offering their work to the "judgement of America" and implicitly denouncing the official Italian exhibition at the fair. Boccioni proceeds to describe and define the Futurist movement in opposition to his contemporaries in Europe, explaining "For we are young and our art is violently revolutionary."[122] By confronting the reader with inflammatory statements, Boccioni sets the tone for the rest of his essay and, of course, for the work itself.

Boccioni takes steps to both align the Futurists with and distance them from the Parisian avant-garde. He begins by declaring the Futurists to be at "the head of the European movement in painting…" and then concedes that they have arrived, "…by a road, different from, yet, in a way, parallel with that followed by the post-impressionists, synthetists and cubists of France…"[123] Boccioni proceeds to launch into a tirade against the French academic style, exemplified by Corot, Ingres, and Poussin, denouncing their reliance on classical Greece. For the Futurists, he contends, the past had been thrown off; they were free to "start

[120] Neither Marinetti, nor any of the exhibiting artists, made the journey to the United States for the exposition; therefore, the essay was their only voice at the fair that addressed the exhibition and Futurist doctrine directly (other than the art works themselves).
[121] Boccioni, "The Italian Futurist Painters and Sculptors," 123.
[122] Boccioni, "The Italian Futurist Painters and Sculptors," 123.
[123] Boccioni, "The Italian Futurist Painters and Sculptors," 123.

afresh."[124] Freed as he is from the burden of academicism, Boccioni declares that "there can be no modern painting without the starting point of an absolutely modern sensation"[125] and that up until now, no movement has successfully captured that sensation. The essay is a kind of declarative statement (a manifesto) to an audience with no other context for, nor previous engagement with, European avant-garde art. In making this declaration of Futurist art and theory, Boccioni denounces all of the art in the Palace of Fine Arts that was representative of "academic forms,"[126] which was, essentially, everything the Department of Fine Arts had to offer. Some critics found the manifesto "egotistical and dangerous;"[127] it did little to aid them in understanding the work, while it also condemned the entire fine arts program at the PPIE (especially the celebrated Impressionists).

John Nilsen Laurvik, an American art critic and curator, as well as the Commissioner of Fine Arts and member of the International Jury of Awards for Norway at the PPIE, was the man responsible for bringing the Italian Futurists to the Panama-Pacific International Exposition.[128] Only months before the exposition was set to open, prompted by a shortage of art works, Laurvik sailed across the Atlantic in order to acquire more examples of European art for the Palace of Fine Arts. An article appearing in *The Review of Reviews* in April 1915 described, quite dramatically, the difficulties of transporting a ship of artworks

[124] Boccioni, "The Italian Futurist Painters and Sculptors," 123.
[125] Boccioni, "The Italian Futurist Painters and Sculptors," 124.
[126] Boccioni, "The Italian Futurist Painters and Sculptors," 124.
[127] Michael Williams, *A Brief Guide to the Palace of Fine Arts Panama-Pacific International Exposition (Post Exposition Period)* (San Francisco: San Francisco Art Association, 1915), 55.
[128] Originally from Norway, Laurvik identified himself in *The Official Catalogue of the Department of Fine Arts at the PPIE* as a New Yorker; at the same time he was beginning to establish himself as a curator and critic in San Francisco. Laurvik would eventually have a long and prosperous career in California. Trask and Laurvik eds., *Catalogue Deluxe of the Department of Fine Arts*, x.

across the Atlantic during the politically tumultuous time: “under conditions of world-wide war the work [of obtaining art loans in foreign countries] is a hundred times more difficult, and the chance of success proportionately less.”[129] The article reports that after visiting Austria, Hungary, Italy, and the Scandinavian Countries, Laurvik managed to obtain and safely transport over one thousand art works from Europe to the exposition. Furthermore, the article made specific note of a special visit Laurvik undertook to the home of Filippo Tomasso Marinetti, the leader of the Italian Futurist movement. From this encounter, Marinetti pledged fifty art works (both paintings and sculpture) by his leading artists for the exposition.[130]

Despite Laurvik’s enthusiasm for the movement and the desire on the part of exposition organizer’s to display the newest and most advanced of everything the modern world had to offer, “the Futurist works received little attention”[131] and the exhibition received almost no publicity.[132] Visitors to the exhibition laughed at the works of art[133] and American critics were, at best, dismissive of them. Suffering less-than-kind reviews and poor viewership[134] the exhibit was left out of most of the official records and publications of the exposition.[135] Perhaps due to its negative reception and lack of publicity the exhibition was “overlooked by most…visitors,”[136] and ignored in most historical accounts of the exposition and

[129] Anonymous, “Collecting Art,” 462.
[130] Anonymous, “Collecting Art,” 462–463.
[131] Lisa Panzera, “Italian Futurism and Avant-Garde Painting in the United States,” in *International Futurism in Arts and Literature*, ed. Günter Berghaus (Berlin: Walter de Gruyter, 2000), 223.
[132] Burke, “Futurism in America,” 59.
[133] John D. Barry, *The Palace of Fine Arts and the French and Italian Pavilions* (San Francisco: Taylor & Taylor, 1915), 53.
[134] Boas, “At the Fair,” 66.
[135] Burke, “Futurism in America,” 59.
[136] Boas, “At the Fair,” 66.

of Futurism. As a result, this moment of Italian Futurism in America has been virtually ignored by scholars of Italian Futurism and American art alike.

Along with all of his other duties at the PPIE, Laurvik contributed several essays to the *Official Catalogue of the Department of Fine Arts*, including a short piece entitled, "Postscriptum: Apropos New Tendencies," placed directly after Boccioni's essay, in which he anticipates the unwelcome atmosphere the Futurists would find at the exposition in San Francsico. Laurvik begins,

> Only the new and strange arouse the antagonism of popular opinion, for it is one of the particular attributes of popular opinion that it is ever ready to pronounce judgement upon the new, of which it knows nothing, while remaining in a state of complacent indifference to the old, with which it has had every opportunity to become familiar.[137]

Laurvik encourages his audience to confront their own prejudices in order to embrace the new (the Futurists).[138] He reminds his audience that the Impressionists (who were very popular at the Exposition) were once "despised and rejected…and…were voted failures by the popular voice," and that they are now "accepted among the elect; great museums vie with one another for their

[137] John Nilsen Laurvik, "Post Scriptum: Apropos New Tendencies," in *Catalogue Deluxe of the Department of Fine Arts, Panama-Pacific International Exposition*,"eds. John E. D. Trask and John Nilsen Laurvik (San Francisco: Paul Elder and Company, 1915), 128.
[138] Although Laurvik, the man who had made a special trip to acquire the work, held a prominent position within the California art scene at the time, and would continue to do so, he identified himself in the *Catalogue Deluxe of the Fine Arts Exhibition* as a New Yorker rather than a Californian or a European; Laurvik associated his critical perspective with East Coast based criticism, rather than Californian. In his essay in the *Catalogue Deluxe* Laurvik writes as though he knows the Futurists will not find a willing audience; perhaps by situating himself as an American East Coast critic he hoped to engender a more sympathetic and authoritative critical voice. He implores the American public to be open to new experiences, reminding them that since Rembrandt "great masters have come and gone without once gaining the popular suffrage of their contemporaries," (Laurvik, "Post Scriptum," 128).

possession and fortunes are exchanged for canvases that scarcely fetched the cost of the materials when they were painted." [139]

Laurvik also addresses a prevailing criticism of the European Avant-Garde by the American public and American critics:

> …the disturbing element that puzzles critics and public alike, [is that they] are ignominiously left in the lurch for want of some sort of clew to [the new arts'] meaning. However, I am certain that this whole misunderstanding is primarily due to an ignorance of the causes underlying this movement of which the public has so far seen only the effects…This will require a sympathetic and receptive attitude on the part of the public and long and patient study on the part of the critics who have presented them a unique opportunity to render a real public service by providing a clear, scientific analysis of the relations and ramifications of these unknown elements.[140]

Laurvik acknowledges the lack of knowledge and information regarding the new artwork coming out of Europe, and he implores the public to remain patient, while encouraging critics to study the new work in order to provide them with guidance.

Christian Brinton, art critic, collector, curator, and author of *Impressions of the Art at the Panama-Pacific Exposition* (1916), one of the few to follow Laurvik's advice, writes:

> Amid a vast amount of violence and bombast there lurk, at the basis of Futurism, certain valuable and invigorating truths. As an artistic demonstration it is virile and anti-sentimental. It is exhilarating, positive, and nationalistic…the Futurist art is innately vivid, colourful, and effective. It is the desire of the Futurist to interpret life as it throbs and surges around him, to catch its movement, to convey a sense of its complexity, both visual and psychic. Everything that one sees, thinks, feels, or recalls may be crowded into a Futurist canvas. These men are striving, one and all, to destroy the traditional fixity of impression. They aim to demolish the theory that a given scene is unalterably focussed in the eye. Their art typifies not unity, but diversity, not that which is dead and immobile, but that which is vital, fluxional, and dynamic.[141]

[139] Laurvik, "Post Scriptum," 128.
[140] Laurvik, "Post Scriptum," 132.
[141] Christian Brinton, *Impressions of the Art at the Panama-Pacific Exposition* (New York: John Lane Company, 1916), 10.

As a critic, Brinton had enough knowledge to go beyond the "vast amount of violence and bombast," to find the "valuable and invigorating truths" in the works. Brinton titles the chapter from which this quote was taken "The Modern Spirit in Contemporary Painting," and he situates it at the very beginning of his book. Brinton felt strongly about educating and encouraging the public to approach contemporary painting, which he acknowledges "presents an appeal not alone stimulating but possibly also disconcerting."[142] Brinton does not singularly champion Futurism; instead, he attempts to provide a coherent narrative and context for contemporary art of the period.[143] Brinton's outlook is favourable for contemporary art in general; he writes, "It is either immature or indurate to condemn or deride the countless isms that now and then disturb the sometimes too tranquil surface of contemporary art. There is in each a gem of verity and a wholesome fund of fermentation."[144]

John Barry, who is less favourable than Brinton, included an observation of visitors' reactions to the exhibition in his guide to the Palace of Fine Arts from 1915. He writes "…I stood amongst those curious examples of one of the new and revolutionary movements in art [Italian Futurism]…the people about me…were having a good time, pointing out to one another good examples of absurdity."[145] While Barry highlights the negative reception of the Futurist work by the visitors to the exhibition, he never condemns or ridicules the art work; instead, he remains impartial. In the preface to his short guide, Barry writes,

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[142] Brinton, *Impressions of the Art,* 1.
[143] Milton Brown writes that Brinton "was interested in the introduction of European modern developments in America… [specifically] the Russians." Milton Brown, *American Painting: From the Armory Show to the Depression* (Princeton: Princeton University Press, 1955), 89.
[144] Brinton, *Impressions of the Art,* 13.
[145] Barry, *The Palace of Fine Arts,* 53.

> We look at art from our own point of view instead of looking at it from the artist's point of view. Instead of saying "Why did he do this thing in this particular way," we say, "Why didn't he do some other thing in some other way," which amounts to saying "When he was trying to express himself, why didn't he express me?[146]

Although Barry encourages viewers of the exhibit to give the Futurist art work—and Modern Art in general—a fair chance by setting aside their own prejudices, he does ultimately criticize the Futurists for not providing enough information to successfully analyse the images: "there is no key in the painting, nor indeed a coherency of style amongst the artists themselves."[147] He concludes that Futurism may be an early step in the rejuvenation of painting, but, by Barry's standards, this is not an accolade, merely a concession that Futurism is destined to be surpassed by something else and ultimately forgotten (doomed to fall out of style).[148] Barry maintains a critical distance from the artwork; he neither condemns nor celebrates the Futurist exhibition.

Of the critics who outright panned the exhibition, Michael Williams stands out for his vehement position. In his guide to the Palace of Fine Arts from 1915, Williams begins by directing interested readers to "the chapter on [the Futurist] work in the Catalogue Deluxe by their spokesman Omberto Boccioni," misspelling Boccioni's first name, Umberto. He follows this suggestion up with the following qualification:

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[146] Barry, *The Palace of Fine Arts*, xi.
[147] Barry, *The Palace of Fine Arts*, 57.
[148] Marinetti writes, in "The Founding and Manifesto of Futurism," "The oldest of us is thirty: so we have at least a decade for finishing our work. When we are forty, other younger and stronger men will probably throw us in the wastebasket like useless manuscripts – we want it to happen!" Marinetti includes himself and the rest of the Futurists' in the continual cycle of renewal by which the past is destroyed. By equating the Futurists' work with fashion, Barry (and others) reduce their work to less-than-art, merely a superficial decoration, rather than acknowledging the Futurists' program. Marinetti, "The Founding and Manifesto of Futurism, 1909," 23.

> …it is well that a little note of warning be sounded in regard to the danger of forming fixed opinions by means of reading about art instead of using one's own eyes and one's own honest judgement…This has happened so often that at last a contrary habit has been established, namely, to welcome eagerly each and every manifestation, no matter how bizarre, simply because it is new….It is more dangerous because license is always more injurious than restriction; the whole school of modern "liberty at any price" propagandists to the contrary notwithstanding.[149]

Where Laurvik, Brinton, and Barry encouraged viewers to go beyond their own prejudices in order to embrace new art, Williams exhorts his readers to trust their own judgement with regards to the Futurist exhibition and every new manifestation of art. Williams makes his position clear with his final statement, "it seems certain that what [the Italian Futurist] gallery contains is simply the anarchistic inventions of a tribe of utterly egotistical and dangerous fanatics; to be condemned without hesitation, finally and firmly." [150] With this final statement, Williams' review of the Futurist exhibition takes on a mocking tone; misspelling Boccioni's name now appears deliberate rather than accidental and Williams' condemnation of bizarre art seems to reflect his opinion of the Futurists.

As for the reception of the Futurist exhibition by American artists, Nancy Boas devotes a chapter of her book about the California modernists known as *The Society of the Six* to the reaction of California artists to the fine arts program at the PPIE. She found that although some of the California modernists did see the Futurist exhibition, none of them appeared to find it interesting or influential; painter Louis Seigriest recalled, "[We] talked about the Futurists but none of us followed in that tradition. Not even the colors affected us."[151] A common consensus among scholars of American Art, such as Lisa Panzera, Milton Brown,

[149] Williams, *A Brief Guide,* 55.
[150] Williams, *A Brief Guide,* 55. Williams also wrote a guide to the Palace of Fine Arts at the PPIE for the Post-Exposition in which he writes much of the same thing about the Futurists, while also listing John Nilsen Laurvik's book, *Is it Art?: Post-Impressionism, Futurism, Cubism* (New York: International Press, 1913), as further reading.
[151] Boas, "At the Fair," 60–61.

and Margaret Burke, is that Futurism influenced American art only after American artists, such as Mina Loy and John Marin, visited or lived in Europe. There they encountered Futurist art first-hand and brought it back with them to the US.

Until the 1915 exhibition the American public had very little opportunity to interact directly with Futurism unless they were among those fortunate enough to travel to Europe. The American rejection of Futurism was also due in part to a rivalry between American and European art critics. In her analysis of American criticism related to the 1913 Armoury Show, historian J. M. Mancini suggests that many American critics at the time were criticizing the European avant-garde for withholding specialized knowledge indispensable to the analyses and criticism of the work coming out of Europe.[152] American critics felt unequipped to criticise the new work coming out of Europe because they lacked the expertise exhibited by their European colleagues. They also felt that those who exhibited this expertise guarded it closely, thus maintaining a need for a small group of experts, instead of developing a larger pool of critics. The American critics had assumed the position of figures with specialized knowledge who could help lay people to appreciate art, but the new art and criticism threatened their position. This plays a factor in the limited criticism of the Futurists at the PPIE.

Art historian and curator John Hand addressed the prevailing confusion in America surrounding Futurism before 1915 in his essay “Futurism in America: 1909–1914,” one of the few scholarly works to address this topic, He writes:

> By 1913 the American public had had the opportunity to see reproductions of the Futurist paintings and had read portions of the Futurist manifestoes. It had also been exposed to a variety of newspaper

[152] J. M. Mancini, “Chapter 4: The Armoury Show in Critical Perspective,” in *Pre-Modernism: Art-World Change and American Culture from the Civil-War to the Armoury Show* (Princeton: Princeton University Press, 2005), 133-157.

> and magazine articles on Futurism, some of which identified the movement as specifically Italian while others used the words "futurism" or "futuristic" to denote anything that was modern, avant-garde, or forward looking.[153]

Although he acknowledges that some of the Futurist manifestos and paintings had been reproduced in the US before 1915 (including the founding manifesto in 1909), Hand attests to the fact that there was a pervasive misunderstanding of the term "Futurism" and of the style and ideology of the group in general. This confusion undoubtedly contributed to the critical and public reception of the Futurist exhibition at the PPIE.

Hand is confident in asserting that the confusion about Futurism was widespread throughout the US until at least 1915. The few accounts of the Futurist exhibition at the PPIE—both primary and secondary sources—support this position while also suggesting that reactions to Futurism include both careful indifference and revulsion. In his book *American Painting from the Armoury Show to the Depression* (1955), which addresses the effect of European Modern art on American painting in the early twentieth century, Milton Brown writes, "Although the Futurists were something of a sensation in San Francisco, their effect upon American art as a whole was negligible, proof again that New York was beyond doubt the artistic center of the country, but also that the nihilism of Futurist thinking was completely foreign to the American mind of the period."[154] As Boccioni wrote in the official PPIE catalogue, "we go our way, destroying each day in ourselves and in our pictures the realistic form and obvious details which

[153] John Oliver Hand, "Futurism in America: 1909-1914," in "Futurism," ed. Anne Coffin Hanson and Marianne W. Martin, special issue, *Art Journal* 41, no. 4 (Winter 1981): 341.
[154] Brown, *American Painting,* 64-65*.* Although Brown does acknowledge that Futurism was a significant influence for several American artists, he remarks that they all encountered Futurist work and/or artists in Europe. By declaring New York the artistic center of the country, Brown evokes an old rivalry, here exemplified in art criticism. Although there was a critical impetus to develop and foster an American institution of art criticism, there was still a rivalry between East and West coast criticism.

have served us to construct a bridge of understanding between ourselves and the public."[155] Perhaps the Americans were not ready for the destruction called for by the Futurists.

It may be important to note that Hand's thesis was extrapolated from East Coast, New York-centred newspapers and criticism; based on research in Californian publications, however, I am confident that this misconception existed in California as well. Even Laurvik, who seemed to have had the most invested in the Futurist exhibition, appeared to have been, at least in 1913, a little confused over the term. In his book *Is it Art?: Post-Impressionism, Futurism, Cubism* (1913), Laurvik erroneously identifies Marcel Duchamp, Jacques Villon and Raymond Duchamp-Villon as Futurists. The Futurists were certainly aware of the work of these French artists; however, the French artists were not Futurists.[156] Laurvik's catalogue essay in 1915 does not attempt to define Futurism or its aesthetic, and it does not actively demonstrate an improved understanding of the movement; however, it does express *a desire* to develop an improved understanding of the Futurist movement.

When the Exposition closed in December 1915, it is unclear exactly what happened to the Futurist works of art. Few of the works that were displayed in San Francisco are currently identified or located.[157] The Futurist exhibition was

[155] Boccioni, "The Italian Futurist Painters and Sculptors, 127.
[156] By 1910, Severini and Marinetti had both lived for a time in Paris. The entire group were in Paris in February 1912, for the opening of their first Futurist exhibition at the Bernheim-Jeune gallery. Marianne W. Martin, *Futurist Art and Theory: 1909–1915* (New York: Hacker Art Books, 1978), 120.
[157] Reyner Banham writes, "Futurist paintings from this period are now extremely rare, having been destroyed or painted over…" (108). The period to which he is referring is the early period of Futurism probably from 1909 (the publication of the first manifesto*)* to the death of Boccioni in 1916. Marianne Martin identifies a series of Futurist phases; the first is from 1909–1916 (frequently, it seems, Futurism is divided into two main phases: pre-war (1909–1916) and post-war (1918 onwards). It seems that during the war is a fuzzy

included in the Post-Exposition Exhibition from January to May of 1916,[158] but where most of the Futurist works ended up after 1916 remains unclear. Reyner Banham has indicated that the Futurists often painted over their canvases, making work from their early period extremely rare.[159] Boccioni's sculptures were destroyed in storage when a wrecking crew dismantled the building in which they were being kept. Some of Severini's work found its way to Alfred Stieglitz's gallery, 291, in New York, sometime between the end of the Post-Exposition Exhibition in 1916 and 1917. Perhaps given 291's geographical location in New York—a city which had already been exposed to European avant-garde art work—and because of the gallery's reputation as a venue for avant-garde artwork, Severini's paintings was received more positively than in San Francisco; some of the paintings were sold, and there were favourable reviews.[160] This may be indicative of a paradigmatic shift from California to New York, or it may simply indicate changing attitudes over a period of time (perhaps with the influence of American artists returning from Europe). It was only after the PPIE in 1915, in part due to Severini's 291 exhibition, that the confusion surrounding Futurism was dispelled in the United States.

The 1915 PPIE exhibition was one of the last exhibitions in which the founding Futurist artists displayed their work as a unified group. Circumstances changed during the war: Boccioni enlisted in the army and was killed, while

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stage with little work being produced or exhibited. Reyner Banham, "Section 2: Italy: Futurist Manifestos and Projects, 1909–1914." In *Theory and Design in the First Machine Age* (London: The Architectural Press, 1960), 108. Martin, *Futurist Art and Theory,* xxx.

[158] The Department of Fine Art's guide to the Post-Exposition Exhibition indicates that two works by Francis Picabia and three works by Pablo Picasso were also exhibited at this time; however they were not in the official Exposition. Panama-Pacific International Exposition, *Post-Exposition Exhibition* (San Francisco: San Francisco Art Association, 1916), vi.

[159] Banham, "Section 2: Italy," 108.

[160] Burke, *Futurism in America*, 61–62.

Marinetti aligned himself with Mussolini and the Fascist movement in Italy, losing some old supporters and gaining some new ones. Futurism would never be the same. The works of art which had been dismissed by critics, confused American fair goers at the PPIE, and, which later began to find acceptance in New York, were not the same by the end of the war; the Futurist art displayed at the PPIE was already historical.

In 1912, Boccioni wrote the Technical Manifesto of Futurist Sculpture in which he denounced the "Hellenistic fatuity"[161] he saw dominating European sculpture at the time. He called for a renewal of sculpture, a process he described as "modernization." Boccioni remarked that this process was continually at work in painting but that sculptural production had, despite the efforts of a few, stagnated. He entreated his readers to seek out "new plastic art," "a translation, in plaster, bronze, glass, wood or any other material, of those atmospheric planes which bind and intersect things."[162] Boccioni encouraged sculptors to seek "reciprocal influences between different planes of an object;"[163] he believed that sculptors should seek to create and model the relationships between objects and their environments and vice versa.

Muscles in Quick Motion (Figure 2.6)[164], displayed at the PPIE, depicts an abstracted male figure striding forward. The figure and his motion are rendered in intersecting planes, giving the impression of both a fragmentation and a collision of forces. Boccioni's work makes a statement that neither sculpture, nor the human body exists independently in space and time; instead there is an

[161] Umberto Boccioni, "Technical Manifesto of Futurist Sculpture, 1912," in *Futurist Manifestos*, ed. Umbro Apollonio (Boston: MFA Publication, 2001, 1970), 51.
[162] Boccioni, "Technical Manifesto of Futurist Sculpture," 52.
[163] Boccioni, "Technical Manifesto of Futurist Sculpture," 52.
[164] Catalogue number 1179. PPIE, *Official Catalogue of the Department of Fine Arts*, 109.

inescapable, constant interaction with the physical world and temporal forces. Boccioni was not simply representing a figure in space; he was attempting to evoke a temporal response in the viewer in line with Henri Bergson's theory of duration (or temporality). Boccioni, along with the rest of the Futurists, embraced the writings of the French philosopher, and through his theory of duration, the Futurists developed an aesthetic language of plastic dynamism.[165]

Boccioni, in particular, took up Bergson's writing, and according to Mark Antliff, "Boccioni consolidated the movement's Bergsonian tenets in his book *Pittura scultura futuriste: Dinamismo plastic* (1914)."[166] Boccioni writes:

> In painting, which till now has obeyed static laws and thought of objects in terms of circumscribed contours, perspective is considered as a scientific measurement of what is seen. This conception, purely external and panoramic in nature, runs counter to pure sensation, which obeys entirely contrary laws.[167]

Boccioni evokes Bergson's theory of intellectual/scientific time in his criticism of the static laws of painting which he describes as "purely external and panoramic in nature." As I have previously established in chapter one, Bergson conceptualizes intellectual/scientific time as a superficial perspective, one that privileges the external surface of objects "rather than plumbing [their] durational depths."[168] Furthermore, Boccioni describes the static laws obeyed in painting as "panoramic in nature," here referencing the extensive quality Bergson attributes

[165] Bergson was in fact highly influential for many people in the European Avant-Garde. He even visited the US twice, giving lectures and talks throughout 1913 and 1918. Laurvik and some figures in the Cubist movement are examples of some of the people who embraced Bergsonian thought.
[166] Mark Antliff, "Creative Time: Bergson and European Modernism," in *Tempus Fugit: Time Flies*, ed. Jan Schall (Kansas: Nelson-Atkins Museum of Art, 2000), 37. In Umbro Appollonio's *Futurist Manifestos,* he translates the title of Boccioni's books as "Futurist Painting and Sculpture 1914."
[167] Umberto Boccioni, "Futurist Painting and Sculpture (extracts) 1914," in *Futurist Manifestos*, ed. Umbro Apollonio (Boston: MFA Publications, 2001), 176–177.
[168] Mark Antliff, "Shaping Duration: Bergson and Modern Sculpture," *The European Legacy* 16, no. 7 (2011): 905.

to intellectual/scientific time. Boccioni rejects the static laws of painting based on intellectual/scientific perspectives of time in favour of "pure sensation," which we will find coincides with Bergson's intuitive time.

Boccioni continues with a description of the Futurist perspective, which is contrary to the static laws of painting described above. He writes,

> For us the picture is no longer an exterior scene, a stage for the depiction of fact. A picture is not an irradiating architectural structure in which the artist, *rather than the object*, forms a central core. It is an emotive architectural environment which creates sensation and completely involves the observer.[169]

Boccioni rejects the depiction of the exterior surface of objects in favour of representation that forces the viewer into the center of the work beyond the superficial; in Bergsonian terms, Boccioni favours art work that invokes a *sympathetic* response from the viewer. As I have previously established, sympathy is the position "by which one is transported into the interior of an object…"[170] Boccioni's description of the picture as an "architectural structure" further enforces his desire to centralize the observer. Rather than an architectural structure that enlightens the viewer, Boccioni favours an *emotive* architectural *environment* that evokes the senses of the observer, or the intuitive faculty of consciousness.

Boccioni writes:

> Traditional sculptors made their statues revolve in front of the spectator, or the spectator around the statues…My spiral, architectural construction, on the other hand, creates before the spectator a continuity of forms which permit him to follow ideally (through the form-forces sprung from the real form) a new, abstract contour which expresses the body in its material movements. By its centrifugal direction, the form-force is the

[169] Boccioni, "Futurist Painting and Sculpture, 1914," 177.
[170] Henri Bergson, *An Introduction to Metaphysics*, trans. T. E. Hume (New York: Putnam's, 1912), 159.

> potential of the living form. It is thus in a more abstract way that one perceives form in sculpture. The spectator should construct ideally a continuity (simultaneity) which is suggested to him by the form-forces equivalent to the expansive energy of bodies.[171]

Muscles in Quick Motion is meant to illicit a sympathetic response in the viewer by providing a continuity of forms that allow the viewer to plumb the inner depths of the object. The sculpture is a force; as an object it is meant to bring the viewer into contact with the potential of his own living form. *Muscles in Quick Motion* is not a representation of a man; instead it is a construction of the potential of force to bring the viewer into a sympathetic relationship with his own being.

The founding of Futurism, written by Marinetti in dream-like, stream of consciousness prose, likewise employs Bergsonian philosophy. He begins by describing a gathering of friends in an apartment decorated in the passé bourgeois fashion of orientalism, not unlike the one he had inherited from his father:[172] "For hours we had trampled our atavistic ennui into the rich oriental rugs."[173] By trampling on the rug, a symbol of Marinetti's cultural bourgeois inheritance, Marinetti and his companions reinforce the main tenet of Futurism: the casting off and destruction of the past. The group is trapped inside the domestic setting; they turn to the sounds and shock of the urban street for their emancipation. Right on cue the gathering is interrupted by "the mighty noise of the huge double-decker trams that rumbled by outside, ablaze with coloured lights, like villages on holiday suddenly struck and uprooted by the flooding [river]

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[171] Boccioni's *Futurist Painting and Sculpture: Plastic Dynamism*, 1914, as cited in Antliff, *Shaping Duration*, 93–94; it is unclear whether this is his own translation, or Robert Herbert's translation in *Modern Artists on Art: Ten Unabridged Essays* (Englewood Cliffs: Prentice Hall, c1964) 47–50.
[172] Christine Poggi, *Inventing Futurism: The Art and Politics of Artificial Optimism* (Princeton: Princeton University Press, 2009), 6.
[173] Marinetti, "The Founding and Manifesto of Futurism," 19.

Po and dragged over falls and through gorges to the sea."[174] The sound of modern mass public transportation evokes an image of the tram's trajectory, unique to the speed and size of this new technology; however it takes the "famished roar of automobiles,"[175] modern transportation for wealthy individuals, to spur the group to action.[176]

Marinetti continues, "I stretched out on my car like a corpse on its bier, but revived at once under the steering wheel, a guillotine blade that threatened my stomach,"[177] reinforcing two important Futurist themes: rebirth through machine technology and the power of the individual in harnessing the danger of modern technology. A car race ensues, described in vibrant detail, during which Marinetti and his nameless cohorts hurl themselves through the streets in their cars, rebuffing the advances of a sexually solicitous death at every turn. Suddenly, two cyclists appear directly in Marinetti's path, "shaking their fists, wobbling like two equally convincing but nevertheless contradictory arguments. Their stupid dilemma was blocking my way…"[178] Christine Poggi suggests that the two cyclists represent the two dominant political parties in Italy at the time.[179] These slow-moving older versions of personal transportation, block the road upon which Marinetti is set, the road that will ultimately lead to an emancipation from the past and the rebirth of Italian society through the embrace of violence and modern technology. Marinetti swerves to avoid them and in doing so is violently thrown into a ditch, precipitating the final act of the founding allegory.

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[174] Marinetti, "The Founding and Manifesto of Futurism," 19.
[175] Marinetti, "The Founding and Manifesto of Futurism," 20.
[176] Marinetti has traded one privileged relationship to the world for another. By embracing the race car, it becomes the new inheritance of the bourgeois.
[177] Marinetti, "The Founding and Manifesto of Futurism," 20.
[178] Marinetti, "The Founding and Manifesto of Futurism," 20.
[179] The governing Liberal Party led by Giovanni Giolitti, and the reform wing of the Socialist Party led by Filippo Turati which, according to Poggi, were "forever locked [in] a fruitless debate and a strategy of compromise." Poggi, *Inventing Futurism,* 9.

Marinetti cries out:

> O maternal ditch, almost full of muddy water! Fair factory drain! I gulped down your nourishing sludge; and I remembered the blessed black breast of my Sudanese nurse…When I came up—torn, filthy, and stinking—from under the capsized car, I felt the white-hot iron of joy deliciously pass through my heart![180]

Just as he was nourished as a child by the milk of his Sudanese nurse, Marinetti is nourished by the sludge of the factory. He feels the satisfaction, or joy, of this fare as it passes through his heart instead of through his stomach; the factory sludge does not feed him, it invigorates him. As he and his capsized car are extricated from the ditch by a group of industrious fishermen, Marinetti proclaims:

> And so, faces smeared with good factory muck—plastered with metallic waste, with senseless sweat, with celestial soot—we, bruised, our arms in slings, unafraid, declared out high intentions to all the *living* earth.[181]

Marinetti and his companions are reborn through the violence of the crash and the ensuing baptism in, and intake of, the factory sludge.[182]

For Marinetti, the race car was the perfect symbol for the tenets of Futurism; it was a machine of never before felt speed, harnessed by an individual driver. The racing car placed the dynamic power of speed and modern technology into the hands of an individual: the driver. In October 1908, before the publication of the First Manifesto of Futurism, Marinetti had actually crashed his four-cylinder Fiat sporting car while driving along Milan's north-western industrial periphery.[183] He incorporated many of the details of his accident into the founding manifesto; however, he adjusted some parts to enhance the narrative

[180] Marinetti, "The Founding and Manifesto of Futurism," 21.
[181] Marinetti, "The Founding and Manifesto of Futurism," 21.
[182] This last paragraph is followed by the Manifesto of Futurism, which enumerates the main tenets that had already been described in the allegory of its founding. To recapitulate, the Manifesto of Futurism calls for the renewal of Italian and Western society through the destruction of the past and the violent embrace of modern technology.

[183] Poggi, *Inventing Futurism,* 7.

structure of the allegory and to emphasize the confrontation between old and new. (For example, in Marinetti's crash there was only one cyclist).[184]

If we return to Marinetti's description of the automobile crash, we may begin to examine the transformative power of destruction foregrounded in Futurist art and theory. By relating factory sludge to the breast milk of the Sudanese nurse, Marinetti emphasizes that his encounter with the factory sludge is an encounter between the self and its "other." The Sudanese nurse represents one of Marinetti's first memories of defining himself, of formulating a self-image outside of his own body (his own reflection). She is both female—the opposite gender and a stand-in for his mother—and African, dark skinned and from a different continent. The Sudanese nurse is ontologically undifferentiated from the rich oriental rugs in the bourgeois apartment in which he and his friends began the night and which they ultimately reject. In rejecting the bourgeois "other," Marinetti and his followers sought a new "other," a more accurate reflection of themselves.

The car crash, represents this new encounter with "the other;" however, what happens when the encounter with the "other," with a definition of the human outside of the human (outside of himself), is enacted in a crash? David Wills, professor in the humanities whose work focuses on relationships between the human and the technological, writes, "In the context of a speed that disjoins the body, we must interpret [the] accident as a crash out of the human and into technology."[185] Marinetti suggests that a remaking occurs: a new definition of the

[184] Poggi, *Inventing Futurism,* 8. The automobile remained an important symbol within the Futurist's catalogue of themes and subjects.
[185] David Wills, "*Techneology* or the Discourse of Speed," in *The Prosthetic Impulse: From a Posthuman Present to a Biocultural Future,* ed. Marquard Smith and Joanne Morra (Cambridge: MIT Press, 2006), 246.

human that incorporates the very technology it was crashing into (or through); the interior crashes into the exterior or the exterior crashes into the interior. This crash into ourselves allows us to witness the self in the process of self-creation.

Through speed, violence, and industrial waste, Marinetti and his companions are reborn as modern hybrids, plastered with metallic waste. David Wills writes, "…speed is less a matter of acceleration than one of transformation. Speed is a differential process, an articulation of time and space. Speed reinforces the effect of a displacement into otherness, a *fast-becoming-foreign;*"[186] Marinetti and his companions have passed through death (through the human) to be unified with their technological other, thus remaking their bodies into active, potent agents, which had, until then, been rendered impotent by the speed of modern technology. As products of modernity, of progress in Benjaminian terms, Marinetti and his companions imagine themselves now fully capable of depicting and creating modern life, fully divorced from the past and the external representations that had hitherto governed their lives. In Bergsonian terms, they have actively participated in their own remaking. Boccioni's sculpture is an articulation of speed, of the body hurtling itself forward through space and time. The displacement of space and time is modeled on the frame of the figure; the process of the displacement into otherness, theorized by Wills, is physically rendered by Boccioni. The collision of the internal with the external is the experience of transformation that Wills writes about; in Boccioni's sculpture the displacement of time and space transforms the body as it speeds by.

[186] Wills, "*Techneology*," 245.

Boccioni's vision of the future—a figure striding violently into the future, assembling and reassembling at the same time—evokes Benjaminian visions of modernity, which figure the past in ruin, while hurtling into the future at a speed beyond the human eye. It is only with the speed of the car—the vehicle of modern technology—that a crash of such magnitude or violence as to precipitate a re-birth can occur. And it is only with the speed of modern technology that the Futurists could capture the speed of time moving forward.

Is Boccioni's sculpture headed for a crash? Must it crash? Is it a crash itself? Or is it inevitably and eternally being propelled into the future, a place or state it will always be too early for. Unintentionally *Muscles in Quick Motion* was headed for a crash when, in early 1917, it was destroyed while the building it was being stored in was demolished;[187] Boccioni himself was trampled to death in August 1916 while performing a cavalry training exercise with the Italian army. Individuality is at the heart of Futurist philosophy; just as Marinetti, as the driver, propels the car forward, so too does Boccioni's figure propel himself forward. The Futurist figure who embraces modern technology also embraces the storm from paradise—or the violent speed of modernity; however, that does not mean that they have harnessed the storm. The Futurists embraced violence as the vehicle for social renewal from the beginning; whether it was a car crash or war, the violence of colliding forces inspired the Futurists to envision a future in constant collision. Were their audacious manifestoes to come to fruition, the world would always be in ruin; it would be perpetually ruined, the result of a never-ending cycle of wars and car crashes. There would also be a need for a speed, always

[187] John Golding, *Boccioni: Unique Forms of Continuity in Space* (London: The Tate Gallery, 1985), 16.

faster, in order to produce a bigger crash than before, between forces ever greater.

Figure 2.1 Photographer unknown, *Futurist Exhibition, in situ, PPIE*, photograph, 1915, collection of the San Francisco Public Library, San Francisco (Photo: author).

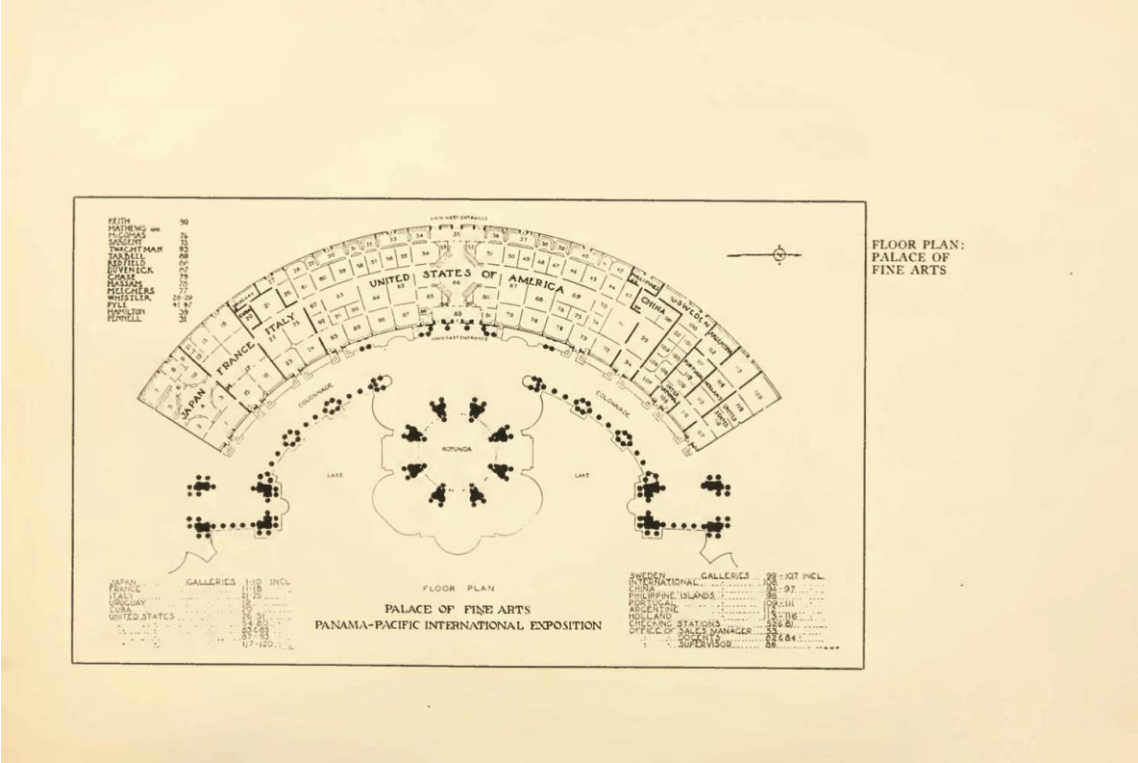
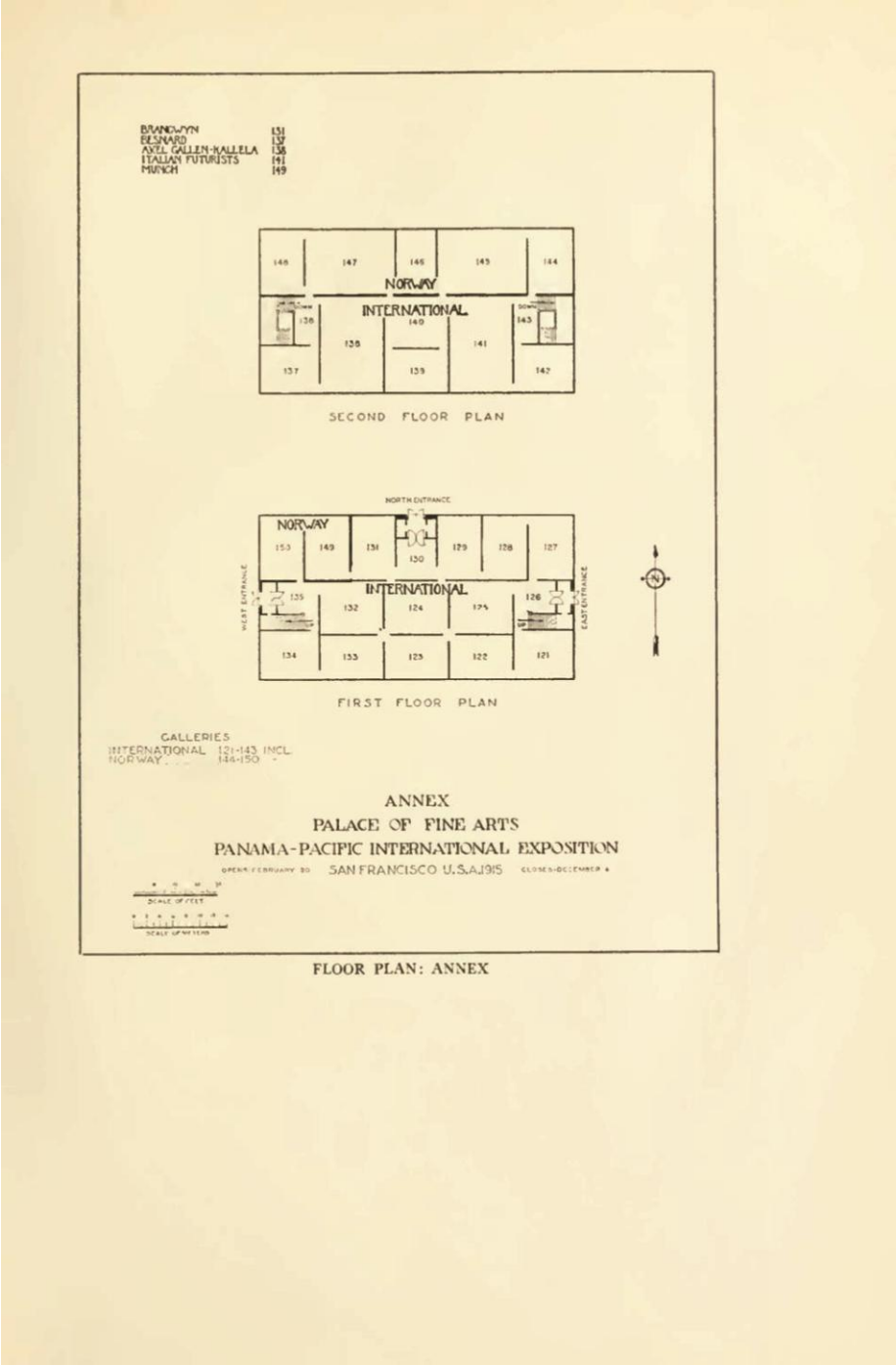


Figure 2.2 “Floor Plan: Palace of Fine Arts,” in *Official Catalogue of the Department of Fine Arts, Panama-Pacific International Exposition*, *San Francisco, California, 1915* (San Francisco: The Wahlgreen Company, 1915), 6 (Source: Internet Archive).



FLOOR PLAN: ANNEX

Figure 2.3 “Floor Plan: Annex,” in *Official Catalogue of the Department of Fine Arts, Panama-Pacific International Exposition*, *San Francisco, California, 1915* (San Francisco: The Wahlgreen Company, 1915), 98 (Source: Internet Archive).

Figure 2.4 Ettore Tito, *La Nascita di Venere (The Birth of Venus)*, 1903, oil on canvas, 185 x 150 cm. Galleria Internazionale d'Arte Moderna, Venice (Source: http://www.archiviodellacomunicazione.it/Sicap/opac.aspx?WEB=MuseiVE).

Figure 2.5 Umberto Boccioni, *Materia (Matter)*, 1912, oil on canvas, 150 x 225 cm. (Source: Artstor).

Figure 2.6 Umberto Boccioni, *Muscles in Quick Motion,* plaster sculpture, 1913 (destroyed in 1917) (Source: Artstor).

Conclusion
The End of the Fair: Ruin

In Chapter 1 and Chapter 2 I deconstructed two modern paradigms of progress—Taylorism and Futurism, respectively—by examining their displays at the PPIE. Taylorism redesigned the human body—and indeed the world—in mechanistic or engineering terms, as Taylor saw it, to better reflect the rapid mechanization of the period. Futurism insisted that the human body, as well as the world, must be refashioned from the destruction of the past, in order to be modern at all. Both paradigms promised emancipation from modernity through an embrace of modern technology. Both Taylor and the Futurists' offered unsustainable visions of the future.

The automobiles, the vehicles of emancipation, at the center of Ford's display and Marinetti's allegory are two different machines. Where Ford designed the Model T with all social classes in mind, Marinetti's race car was a luxury item available only to the very wealthy. Ford's narrative of emancipation figures everyone as consumers. Despite the clear division between producer and consumer in Figure 1.2, Ford envisioned the producer as consumer. He wanted his automobiles to be accessible to his own workers. Marinetti's allegory goes from one bourgeois setting to another. The ability to harness the power of the race car, and the power of transformation that it yields, is available only to the very wealthy. Although Marinetti does refer to the new mass transportation, the bus, that takes people from the city to the sea, the race car is the only vehicle the yields the destruction and subsequent re-creation the Futurists call for. Ford envisioned the future as increasingly accessible to everyone; whereas, for Marinetti, the future was only accessible to a few.

The linear performative nature of Ford's assembly line allowed the viewer to access the narrative very easily; whereas, the non-linear performative nature of *Muscles in Quick Motion* detracted from its accessibility. Today, the material reality of both displays is no longer performative; both displays have been captured in photographs, they are now ontologically equivalent. In his essay, "*Lapsus Imaginis:* The Image in Ruins," Eduardo Cadava writes, "we might…say…what is true of every image: that it bears witness to the enigmatic relation between death and survival, loss and life, destruction and preservation, mourning and memory."[188] "The image," continues Cadava, "tells us that it is with loss and ruin that we have to live."[189] The photographs are ruins, like the Palace of Fine Arts (Figure 0.5).

The speed of modern life, celebrated in both Ford's assembly line display and Boccioni's sculpture, was embedded in the temporal life of the fairgrounds at the PPIE. Construction of the fairgrounds was started in late 1914 and destruction began after the fair closed in December 1915. From construction to completion, and finally destruction, the PPIE existed in physical form only briefly. As a carefully organized and constructed representation of the world, filtered through an American lens, the temporal life of the PPIE mirrored the process of rapid construction and consumption espoused by the Ford assembly line, while also enacting the violent destruction of the world, advocated by the Futurists. Time moved so fast at the PPIE that the architecture of the fair was composed of impermanent ruins.

[188] Eduardo Cadava, "*Lapsus Imaginis*: The Image in Ruins," *October* 96 (Spring 2001), 34

[189] Cadava, "*Lapsus Imaginis*," 36.

Taylorism carved out a lasting legacy for itself as a feat of American engineering in the twentieth century. At an exposition that celebrated a monumental feat of American engineering, the Panama Canal, the modified Ford assembly line display was uncontroversial. Although the PPIE embraced ruin and destruction, due to public outcry, the Palace of Fine Arts (itself an impermanent ruin) was not destroyed after the close of the exposition; instead, it was left to decay over time until it was restored (or simply transformed into a permanent structure) in the 1960s and again in the 2000s. While the Futurists' art demanded a future in perpetual destruction, the PPIE envisioned a future that produced and maintained a cultural legacy of the past.

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